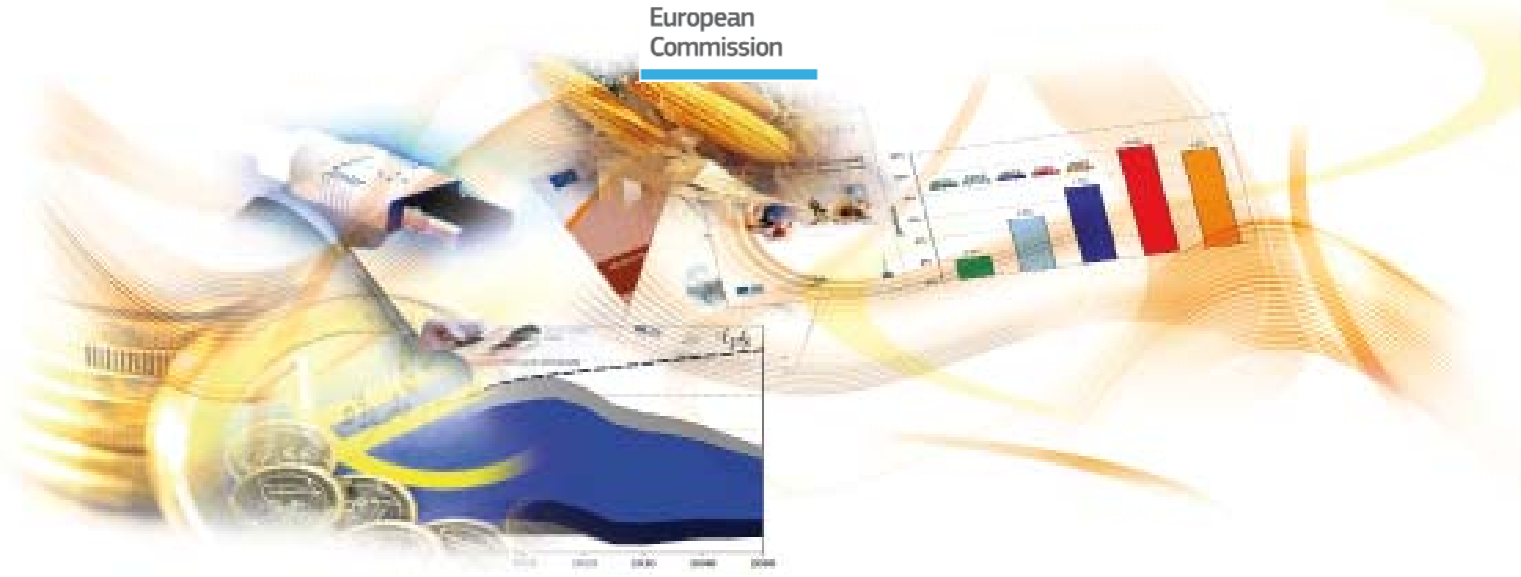




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J R C T E C H N I C A L R E P O R T S

Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries:

A Quantitative Overview

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Preface

Media and Content Industries (MCI) carry out an array of heterogeneous economic activities, which encompass publishing (including music), sound, motion picture and video/TV production, programming, distribution and broadcasting industries, as well as diverse information services.

The common thread in these activities is that they are all conducted by establishments primarily engaged in the creation and dissemination of information and cultural products. Also, the last decade witnessed a progressive intertwining of these activities amongst themselves and with the ICT sector, which increasingly provides the means for disseminating MCI products. At the same time, there was rapid change in the way these establishments worked and their business models (production and distribution processes, key players, organisation, etc.). Last, but not least, there was a substantial increase in the overall weight of MCI in the EU economy.

While understanding and mastering the descriptive quantitative tools that we have to hand is important, it is even more essential to grasp the current dynamics in the various industries in the Media and Content sector, possibly in relation with those in the ICT sector, in order to adapt our metrics and analysis to the current and emerging transformations of these sectors.

Therefore in 2009, IPTS launched a research project on the "Statistical, ecosystems and competitiveness analysis of the Media and Content Industries". This research initially included the preparation of a statistical report, a historical report and three subsector case studies, each supported by a dataset and technical annex. In 2010, IPTS decided to complement the initial case studies (cinema, music and newspaper) with two additional subsectors (book publishing and broadcasting) in order to provide a comprehensive view of the sector. In 2010, IPTS had already released a case study of the video games industry,¹ a fast growing segment of the sector.

This set of studies has two objectives:

1. To offer a quantitative statistical approach to the Media and Content Industries, including their extension or blurring boundaries due to: offline and online activities; innovative activities deriving from recently developed technological applications (i.e. P2P, WEB 2.0, social computing or other related current or emerging trends and technologies); specific sub-industries, companies or products that would not readily fit existing taxonomies.

The above dynamics were reflected in a wide-ranging revision of both taxonomies and classifications. Indeed, the definition itself of the MCI sector stems from a long standing process of standards revision guided by the OECD. This led to the profiling of the digital economy, and the conceptual identification of the MCI and ICT sectors as the two components of the Information Economy domain (OECD 2007, 2009). Similarly, the recently completed revisions of international classifications of economic activities (UNSD 2006, Eurostat 2008) led to the creation of a specific section (the highest rank in

¹ The report starts by introducing the technologies, their characteristics, market diffusion and barriers to take up, and their potential economic impact, before moving to an analysis of their contribution to the competitiveness of the European ICT industry. It concludes by suggesting policy options. De Prato, G., Feijóo, C., Nepelski, D., Bogdanowicz, M., Simon, J.P (2010) "*Born digital/ Grown digital. Assessing the future competitiveness of the EU video games software industry*", JRC Scientific and Technical Report, 24555 EN. Available online at <http://ipts.jrc.ec.europa.eu/publications/pub.cfm?id=3759>

classifications) for Information and Communication activities, which includes both MCI and ICT services.

This represented a significant departure from tradition, in that it brought together industries, previously seen as belonging to very diverse sectors of the economy, in an attempt to better reflect current reality. During the last decade, the industrial environment related to activities such as information archiving, processing or transmission, content creation and exchange, etc. has undergone a series of changes, which make it less and less advisable to analyse the sector, or any of its industries or companies, as a autonomous and separate entity that would simply integrate new technologies for the purposes of straightforward modernisation or expansion. Borders have blurred, roles have changed, and business models have adapted: the ecosystems have evolved radically.

2. To offer an industrial and economic analysis of the Media and Content Industries, and their dynamics. The case studies investigate the past and current ecosystems of these industries, looking beyond value chains or major actors to those aspects that are relevant to the understanding of the transformations themselves: emerging challengers, past and new threats and ways of responding, new business models, major investments, major failures or successes and their causes, technological changes affecting the industry, radical innovations if any, etc.

The analysis in the cinema, music and newspaper case studies follows the framework sketched out by IBBT-SMIT and TNO (2011) in collaboration with IPTS. They consider the interplay between:

- Technological change and innovation, especially ICT and digitisation, as a major driver of industrial and economic change;
- Market developments;
- Industrial structural change, including analyses of concentration and consolidation, integration, diversification and new entries;
- The competitive position of European industry players in a European and global context;
- Impact of digitisation in different parts of the value network (production, aggregation, distribution, consumption of content), new business models, new positions in the value chain, piracy and the role of users;
- The role of policy, i.e. not a full analysis of policy impact on the subsectors, but the main policy issues and trends as important contextual factors.

In the video games, TV and book publishing industry case studies, the framework presents a slightly different pattern, but aims to achieve similar objectives through its analysis.

The video games report documented a series of core insights into the video games industry that allow us to understand the market, its industrial structure including the main actors and activities, the aspects that determine the major tensions and power relations among actors, and also the potential disruptions.

The TV case study follows the same track but explores the relationships between these changes and new TV formats. It adopts a "product" approach to the analysis of the industry, giving special consideration to how European television series, game shows and sports are being produced, distributed and viewed/consumed in the new media ecosystem.

Similarly, the book publishing report considers the redistribution of the components of the book "chain" and the shifting role of various industry players with the development of e-books.

The reports are based on a review and synthesis of the available literature and (official and unofficial) data of the MCI sector, desk research, and several workshops.² The results were reviewed by experts and at dedicated workshops.

The reports aim to offer a reliable set of data and analysis, and also to contribute significantly to the debate about the economic health and development conditions that will support the future competitiveness of the European Media and Content Industries.

Contract title: "Statistical, ecosystems and competitiveness analysis of the Media and Content industries"

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² First MCI workshop, IPTS Sevilla, 30-31 May, 2011: "The economics of Media and content industry (MCI). Approaches, case study, economic effect of the digital transition". Second MCI workshop, IPTS Sevilla, 27-28 October, 2011: validation workshop. All the presentations at the two MCI IPTS workshops are available at: <http://is.jrc.ec.europa.eu/pages/ISG/documents/>

Executive Summary

This study aims first of all to gain a better understanding of the dynamics in the Media and Content Industries (MCI) and to produce an assessment of the current and future competitiveness of the European MCI sector. The study maps the economic value and growth potential of this sector, driven by increasing awareness of the economic value of the sector. The sector itself has grown considerably over the past decades, but it also contributes to the growth of the Information Society. It provides the content which, in digital form, requires high speed broadband networks and thus stimulates the roll-out of broadband networks. The MCI is also an important part of the creative industries, which stimulate a flourishing creative climate thereby attracting other highly skilled economic activities, leading to vibrant urban economies (Florida, 2002; UNCTAD, 2008; European Commission, 2010a).

Secondly, this study aims to gain insights into the fundamental changes in this sector, which have taken place over the past two decades as a result of the introduction of ICT in different parts of the production and distribution process. Some of these technological innovations were so fundamental that they caused changes in the production chain, in the roles and positions in the value chain, in business models and in market structures. In other words, they have led to a transformation of the whole ecosystem.

In order to achieve a thorough understanding of MCI, the study provides a historical overview, which includes an industrial and economic quantitative analysis of the MCI sector, and five sub-sector case studies. It uses official statistical data complemented with data from non-official data sources. Official data sources consulted include the Eurostat data for EU Member States, the OECD and national statistical offices (see paragraph 2.4 for further details). In addition, the report has drawn on a number of non-official sources which complement official statistics and contribute to a better analysis and understanding of the economic profile of the MCI sector, particularly when describing new developments not (yet) covered by official statistics. Data from these non-official sources also describe some emerging trends regarding the effect of ICT on the MCI industries, though these sources have mainly been used for the more detailed sub-sector studies.

In Chapter 2, we explain the approach taken in the statistical analysis of the MCI. The definition of the MCI sector by the OECD and its operationalisation is also discussed, including the limitations of the current definition and operationalisation. The approach taken in data collection and also problems with data availability are described. The following chapters will present the results of the statistical analysis. First, in Chapter 3, general developments in the MCI sector over the past 12 years are presented. This is followed by a more detailed analysis for each of the sub-sectors in Chapter 4, which also discusses differences per country. In Chapter 5, the availability of statistics from non-official sources is discussed, the kind of data that they provide and to what extent these data are complementary to official statistics.

Defining MCI

In order to measure the Media and Content Industries (MCI) sector, a definition of the media and content industry and an operational categorization of media and content activities are required. In this study, we use the definition of media and content activities, based on international taxonomies by the OECD. This report describes the most recent definition suggested by the OECD, which is based on a revision of the industrial classification system (ISIC4). This revision aims to better capture new or growing economic activities such as those in MCI. The benefits and limitations of this revision are discussed. Since data collection by Eurostat based on the new ISIC rev 4 classification (and thereby the measurement of MCI)

started from 2008 onwards and is therefore insufficient to produce time series, the study relies on data that was collected using the ISIC rev 3.1 classification. To be able to make this data useful and more relevant for the analysis and discussion of MCI in this report, the differences between the two definitions is described and the ‘old’ ISIC rev 3.1 categories are converted to the new ISIC rev. 4 categorisation.

The new MCI definition as proposed by the OECD better reflects the current MCI sector structure. However, the underlying categorization of the Media and Content Industries can not account for one of its most apparent trends, i.e. its increasing interconnectedness and convergence with ICT (telecom, computer and software industries). Distribution is now separated from MCI and included in the ICT category, but increasingly distribution companies are involved in acquisition of content and content rights, packaging and marketing of content, sometimes also adding value by producing additional services (EPG, communication services etc.). The same is true for new entrants such as major ICT firms like Google, Apple, YouTube, which are also increasingly involved in not just dissemination of content but also in many content-related activities. Also some categories, such as advertising and gaming, which can be considered as important content-producing activities, are not taken into account. This could lead to substantial underestimation of size and growth in the MCI. In order to provide an impression of their size, additional statistics on telecommunications and software/computer programming and advertising are presented. Moreover, sector 92 includes activities that are relevant to MCI, but which cannot at the moment be extracted for time series analysis.

Statistics on MCI

In this report, the MCI is described by time series of a number of economic indicators: (1) number of firms, (2) number of employees, (3) value added, and (4) trade balance. Value added is used because it is the most *basic indicator of earnings* for specific activities. It is defined as turnover minus cost at firm level. It can be compared with a country’s general economic growth in value added. This key indicator is used in order to observe and to understand the growth level of a sector. Of course, a small sector could easily show large growth figures, and large sectors will often show smaller growth figures. Specialisation indices correct for this phenomenon. This is explained in more detail later on in this chapter. Besides value added, employment is another important indicator. Employment is the clearest *indicator of activity in a sector*. The ratio between employment and value added is labour productivity. The higher this absolute ratio is, the higher the use of capital in case of manufacturing industries or the wages earned if services are involved. A fast growth of this ratio is often seen as an indicator of *the adoption of new and more productive capital or innovation*. The last indicator we consider is average firm size; the number of employees divided by the number of firms. This is an *indication of economies of scale* – the larger the scale, the more economies of scale in the production may be apparent. Moreover, the growth in number of firms gives an *indication of new entrants and new entrepreneurship*. Average size does not convey the distribution over the different size classes.

The data was obtained from the Eurostat and Unido databases. Data are available for all the 27 EU Members States for the period 1995 and 2007 and are based on the ISIC rev 3.1 categorization the MCI. This is comprised of:

Printing, publishing and reproduction of recorded media industry (category 221), which consists of publishing of books, brochures and other publications, publishing of newspapers, journals and periodicals, publishing of newspapers, publishing of sound recordings and other publishing.

Recreational, cultural and sporting industry (category 92), including motion picture and video activities, radio and television activities, other entertainment activities, together with news agency activities, library, archives, museums and other cultural activities, sporting activities and other recreational activities. However since data at a detailed level was not available, this category is presented as a whole rather than at disaggregated sub-sector level. The consequence is that the broadcasting and motion pictures industry remains hidden in this broad category.

To take into account the different development paths of countries, and depending on when they joined the EU, data is provided for all 27 European countries, the initial 6 countries, the subsequent 9, the total for the initial 15 Member States and the additional countries that joined after that (EU new). This grouping expresses GDP per capita: highest in the initial 15 (EU15) and the lowest in the latest countries to join the EU (EU new).

Value added

MCI as a share of the overall economy is more or less the same across Europe. Due the higher GDP per capita in the EU6, demand and therefore the market for these particular goods and services was higher. The publishing of newspapers is the largest publishing subsector, followed by publishing of journals and periodicals. Only in the new EU Member States is the share for publishing of books higher compared to publishing of journals and periodicals.

The recreational, cultural and sporting industry, which encompasses broadcasting and motion pictures, is by far the largest industry in terms of value added. It accounts for about 170 billion EUR in 2007 (almost 80% of total value added generated in MCI). In contrast, the European publishing industry had a value added of 43 billion EUR in 2007. However, new ISIC rev4 data reveal that in 2008, only approximately 30% of value added in this category (92) can be attributed to MCI. If this is projected on the 2007 data, category 92 activities relevant to MCI is 54.3% of total value added in MCI.

Average annual growth levels of MCI for the EU27 are higher than the overall growth levels and this is a general pattern throughout the EU. The EU9 countries show the largest growth. This growth pattern does not imply a large net shift of MCI activities from western towards Eastern Europe; growth of MCI in Eastern European countries does not come at the expense of MCI in western European countries, rather the whole market increases.

The largest markets in the EU27, based on value added are the United Kingdom, Germany, France, the Netherlands, Italy and Spain. Although this is true for most subsectors, in sound recording Sweden instead of Spain is included as large market and for other publishing, Denmark is included instead of the Netherlands.

Employment

In 2007, the entire European economy employed some 226 million people; the MCI employed 10.8 million people across Europe. More than half of these people were employed in the EU6. The average annual growth rate in employment for the MCI between 1995 and 2007 was higher than the growth rate for the economy as a whole in the EU27. The growth of employment in the publishing sector in the new access countries was relatively high. This was not only an economic catch-up, but can also be attributed to catch-up of free press.

The MCI employs a total of 10.8 million workers in the EU27. A very large majority (92.2%) of these employees work for firms in the recreational, cultural and sporting activities sector. The publishing industry has only a small share of all employees active in the MCI sector, i.e. around 850,000 employees in the EU-27. New 2008 data based on the ISIC rev4 definition reveal that approximately only 10% to 20% of employment in the recreational, cultural and

sporting activities sector in 2008 can be attributed to MCI-relevant activities. If this percentage is projected on the 2007 data, this would mean that the recreational, cultural and sporting activities sub-sector comprises approximately 64%, whereas the publishing sector would amount to 36% of total employment in the MCI sector.

For a number of subsectors, the number of employees in the EU27 is larger than the number of employees in the US, though in publishing of newspapers and publishing of sound recordings this is not the case. Considering that the number of enterprises in publishing of news is similar for both the EU27 and the US, companies in the US on average employ more people. For sound recording this is certainly the case: the number of enterprises in the US is much lower, while the number of employees is higher. For this subsector, economies of scale are most certainly relevant considering the large domestic as well as international market, and therefore one would indeed expect fewer but larger companies than in EU27.

Specialisation

The specialisation index takes the share of a sector in the entire European economy as a baseline and compares this share to this baseline. A larger share means that the sector is overrepresented and from an economic point of view, an overrepresentation means that there can be a comparative advantage. Publishing is overrepresented in the EU9 and underrepresented in the new access countries, probably due to the fact these countries have lacked a free press and a free market economy.

The relative changes of the specialization indices reveal that in the new access countries publishing gains importance for the economy, particularly the publishing of newspapers. In the EU6, the specialization index of newspapers and sound recordings is declining, whereas the publishing of journals and periodicals is increasing.

Firm size

The average firm in the publishing sector has approximately 10 employees, which is small according to Eurostat criteria. The variation in average firm size between sub-sectors is large; on average, firms that publish newspapers are relatively large (33.6 employees) compared to firms that publish music recordings (1.8 employees). The average firm size in all sub-sectors, except for the publishing of journals and periodicals, has decreased each year. The size of firms that publish newspapers decreased most dramatically over the 1995-2007 period, due to increased competition and declining advertising revenues, titles and circulation and declining readership.

In terms of the number of enterprises, there are fewer enterprises in the US than there are in the EU27. This might be explained by the fact that the US is one market, legally, economically and culturally, which creates potential for economies of scale and scope. The difference between the US and the EU27 is less in the publishing of newspapers, which might be explained by the regional and local nature of much newspaper publishing in the US. The European publishing industry encompasses a total of 83,472 firms which is far more than the four biggest other economies together. The largest sub-sectors in terms of number of firms are the publishing of books and the publishing of journals and periodicals, which includes magazines.

Labour productivity

On average, the average labour productivity of MCI was 19,800 EUR per employee in 2007, which was not even half the average labour productivity in the EU economy as a whole (41,100 EUR). However, it should be taken into account that approximately 80% of this (weighted) figure can be attributed to the recreational, cultural and sporting industry and only

20% to the publishing industry. The latter has a much higher labour productivity of an average of 50,800 EUR against 17,100 EUR in the recreational, cultural and sporting industry. Within the publishing industry, differences in labour productivity also exist between the sub-sectors, but to a much smaller extent. The publishing of books and the publishing of newspapers seem to be the most capital-intensive sub-sectors, with a relatively high labour productivity. In publishing of sound recordings and other publishing, labour productivity is lower (44,800 EUR), but still higher than the overall EU average labour productivity.

Unofficial statistics

In order to complement the data from official statistics, the study includes ‘unofficial’ statistics on developments in MCI. With the help of this data, it provides insight into the transformations taking place in MCI that are not immediately apparent in the official statistics. The main topics for which statistical evidence has been collected are the transformations resulting from the impact of ICT, or more specifically the impact of the internet and digitalisation on the production and distribution of media and content. This concerns especially the shift from *offline (physical) to online digital distribution* of content, and the impact of piracy, P2P networks and user-generated content in particular sub-sectors. Some of these data are also included in the subsector case studies that are part of this study.

ICT and digitization have had effects throughout the value chain, from creation and production through aggregation and distribution to consumption. In this section, we will present data on the impact of online and digital distribution on the markets for recorded music, filmed entertainment (film, TV, video) and publishing activities (news, books). The impact of digitization is apparent in the increasing shares of the total revenues that are generated by selling digital media and content products, compared to the analogue products. Another indicator of the increasing economic value of digital MCI products and services are advertising expenditures in different media, showing an increase in internet advertising.

In all MCI sectors, spending on digital content has increased over the past decades. Digital spending increased from 1% for books and magazines and 11% for recorded music in 2006, to 3% (books and magazines) and 31% (recorded music) in 2010. These numbers show that although spending on digital content has become substantial, legacy offline revenue streams are still significantly larger than digital revenues. At the same time, digital spending is increasing more than non-digital spending. The share of digital revenue for the music industry is especially large, increasing from 11% in 2006 to 31% in 2010. Film/video, newspapers, magazines and books lag behind with digital shares that remained below 6% of revenue between 2006 and 2010.

Film and TV

Global consumer spending on filmed entertainment rose slowly from 2006 to 2010, with a small decline in 2008 but a recovery in 2009. It is the only segment in the media and entertainment industry that showed growth in 2009, mainly through a growth in box office spending, largely attributed to the introduction of 3D movies. The recession, together with piracy, caused the physical sell-through market to fall in 2008. The digital distribution (through online rental subscription and digital downloads) of filmed entertainment rose, reaching a peak in 2007. Digital distribution and sales have been growing fast, but as a share of total spending digital was still only 6% in 2010.

Film and TV have witnessed a shift from analogue to digital and online consumption. Digital TV channels (many special interest or targeted channels), online video-on-demand services, video-on-demand (VOD) services offered on TV platforms, catch-up or delay TV services, online file sharing platforms such as YouTube and mobile TV services and apps for tablets

are some of the many new ways in which film and video are distributed. This shift to digital and online platforms and distribution channels has also caused a shift in video consumption and the revenues in the film, TV and video industry.

Another indicator for shifts in media markets are advertising revenues for digital outlets. The shares of advertising expenditures per medium type in 7 EU Member States, the US, China, India and Japan in 2005 and 2009 show a considerable increase in internet advertising expenditures. In 2005 in all these countries, a relatively small proportion of advertising expenditure was related to internet advertising compared to the expenditure on advertising in traditional media. In 2009, the share of expenditures on internet advertising grew substantially, although newspapers and television remained popular advertising media.

To deal with the new dynamics, new business models are slowly being adopted by traditional media companies, but they are to a large extent driven by new market entrants such as Apple's iTunes, Google's YouTube, Netflix and Hulu. These are often referred to as remarkable new market entrants in the film and audiovisual sector. Although YouTube (since 2006 owned by Google) is mainly focused on user-generated content, the OECD considers it to be a new venue for products of commercial film and video distributors and thus states that it has an increasingly significant role in the digital content market place.

Music

The global music industry has been declining over the last five years. Global spending on recorded music decreased rapidly from 2006 to 2010. At a continental level, North America experienced the largest decline in spending on recorded music. In Western Europe, the decline was larger in 2007, but the recovery faster. Spending on recorded music in Asia Pacific has caught up with other regions in terms of declining markets. While Japan, a large player on the music market, has experienced a decrease in spending over the past few years, South Korea has experienced a considerable increase. The rise of online distribution of music has strongly impacted the traditional music industry.

In the last decade, peer to peer (P2P) networks have provided consumers with a new way of sharing and searching digital content, because each P2P user is both client and server. However, the use of these networks has become increasingly associated with piracy, as most of the data shared in P2P networks is shared illegally. The effects of illegal file sharing continue to be felt by the media and content sector, according to the industry.

While digital distribution of music is increasing, physical distribution, which still has the largest revenue share, keeps decreasing. In Western Europe and the US, a considerable part of music is consumed through digital channels. On average 70% of all music consumed in the USA, UK, France and Germany is consumed through the internet (downloads, streaming radio, etc.) or other digital platforms. However, revenues from digital platforms account for only 35% of industry revenues on average in these countries. Although this is more than the global digital revenue share (27%), revenues are still relatively low, considering the fact that music is mainly consumed through digital channels.

News

Online news has become a popular source of news and the internet has overtaken newspapers in popularity as a news source. However, in the first decade of the 21st century, print remains the main revenue driver for newspaper publishers. Digital advertising accounted for 2% of the spending on newspapers in 2005, rising only to 4% in 2009. Nevertheless, the potential for digital online growth is widely recognized due to rising website traffic, and therefore, new business models are being incorporated by the traditional news industry and new market entrants, which focus only on online news provision. There is little evidence for proven

concepts of online business models for news. However, a range of innovative new business models are being invented, from those that focus on hyperlocal content to those that focus on publicly-supported not-for-profit journalism.

Books and magazines

Within the traditional publishing industry, online distribution has so far had the largest impact on the publishing of news, as the internet has become the second medium of choice (after television) for news consumption, leaving newspapers behind. Revenues in the newspaper industry declined 11% in 2009 and remained stable in 2010, whereas in 2007 revenues showed a small growth. However, digital news so far has not been able to provide a profitable replacement for printed newspapers. Although digital advertising income has been increasing (except for a decrease in 2009), as a share of the total advertising income in 2008, it amounted to only 7% in 2010.

Spending on books rose slowly from 2006 until 2008, but in 2009, it decreased slightly. In 2010, there was a minor increase. The sale of electronic books, though still small compared to physical books, has been increasing fast: spending on electronic books almost doubled on a yearly basis from 2006 to 2010. The consumer magazines industry was quite steady until 2008, but it was affected by the recession, which resulted in a 2.1% decrease in spending in 2009, and a 10.6% decrease in 2010. Electronic books are still marginal compared to overall spending on books. Free online book services such as Google Books (a service from Google that searches the full text of books that Google has scanned, converted to text using optical character recognition, and stored in its digital database) are considered a serious threat to the traditional book industry. However, the true effects of these services on the sector are as yet largely unknown.

EU competitiveness and the single market

Often the extent to which the EU27 can function as a single market is seen as a precondition for increasing the competitiveness of the EU vis-à-vis the US and Asian markets. The study looks at the level of intra-EU imports and exports, based on Eurostat data. These data indicate the exports and imports of EU Member States to and from other EU Member States. Moreover the study looks at the external competitiveness of the EU27, and compares the EU27 to its major competitors, the US and Japan, China and India.

Trade balance

Both the publishing and the recreational, cultural and sporting sector showed a strongly negative trade balance in 2007, with a total trade deficit for the European MCI sector as a whole. The publishing of newspapers sub-sector showed the most dramatic figures, particularly due to a large trade deficit in Germany. The publishing of sound recordings and other publishing were the only sub-sectors with a slightly positive trade balance. The net trade position of the MCI sector appears to have fluctuated rather dramatically during the period 1995-2007, but, surprisingly, the MCI as a whole managed to decrease its total trade deficit.

Share of EU companies in top 15 MCI companies

Another indicator for competitiveness is whether a country or region is the homebase of large firms. The top 15 media companies show a remarkable increase in the number of USA-based companies over the 1988 – 2008 period. In 1988, seven of the fifteen companies were from the USA. This grew to eight in 1998 and then to ten in 2008. Europe only had five companies in the top 15 media companies in 1988, four in 1998 and only three in 2008. For Asia, only Japan can be seen as competitor for the USA, with three companies in the top 15 in 1988 and 1998, and two in 2008, of which one (Sony) is in second position. In terms of market share in

1994, the European audiovisual industry still had the largest global market share (based on the annual turnover of 50 leading world companies, by nationalities of these companies). By 2008, however, the US had the largest share. US productions have a large market share on the European market because, unlike European productions, they benefit from the internal European market. This is illustrated by the fact that seven of the twenty largest film companies in Europe are subsidiaries of Hollywood-based companies that work on both national and trans-national levels.

In the music industry, the US also had the largest global market share, followed by Europe. Five major record labels (BMG which became part of Sony Music in 2008, EMI, Sony, Universal and Warner) dominated the industry in 2004/2005 and had a combined market share of almost 66% in Europe in 2006.

In the publishing industry (newspapers, books and magazines/periodicals), the position of European companies is stronger than that of companies in the USA. In most cases, the import and export of books, newspapers, periodicals and other materials is twice that of the USA, and European exports are higher than the imports. Similar to the audiovisual and music industry, the European publishing industry is represented by a small number of very large players, of which some are world leaders in publishing. As well as these large companies there are many medium-sized and small companies. Within the publishing industry, the newspaper and magazine market is quite concentrated and dominated by large organizations, while the book market is characterised by many small, specialised publishers.

Conclusion

The sector is downscaling: many small firms have entered the markets. Economies of scale are no longer decisive to publishing and niche markets can be served with new technology.

Digitization has had different effects in the production chain. Not only the production process but also distribution and consumption processes have changed profoundly. Physical distribution has been substituted by digital distribution, but total revenues (physical and digital) have declined. This implies that prices are falling. The question is to what extent are we witnessing an example of Schumpeter's creative destruction, where innovation has replaced old products and processes by better ones with increased welfare as a result, or whether the effects of internet and digitization also have some more worrying results. The introduction of new techniques resulted in more efficient distribution and lower cost for the consumer. More content became accessible at low cost for large consumer markets, and consequently it could be argued that welfare has increased significantly. Niche markets have also benefitted. Due to low cost digital technology, it has been possible to reap benefits in geographically dispersed and small niche markets. And global markets can be reached more easily.

The new technologies thus seem to be more productive than the old ones. However, value added rose slightly in the publishing, printing and reproduction of recorded media. To a lesser extent, the same happened in employment. This indicates that reaping the monetary benefits became more difficult. There is more competition, so the excess profits previously reaped by monopolies are things of the past. But also, it has become harder to monetize the increased consumer surplus. In other words, a lot of content is reaching the consumers for a low price or for free, legal or illegal. Viable business models are lagging behind.

A consequence of this development is that the cost of generating new content (investment) can hardly be covered. This could imply that the new MCI will suffer in the longer term and that the quality of content will be downgraded. Raising the necessary funds to produce quality will be difficult, since consumers get a lot of content for a low price or too cheap. For

example, up until now Philips has been able to invest in R&D to develop new products. R&D funds have been raised by factoring them into the consumer price, which is possible in an oligopoly and monopolistic competition. Thus, Philips has been able to sustain the quality of their electronic products. This business model no longer applies to the MCI. Due to cheap distribution of content and the changing external organization of the markets (from monopoly towards perfect competition), the suppliers in this market are finding it harder and harder to generate funds to develop content for the future

Table of Contents

Preface	1
Executive Summary	5
1. Introduction	17
1.1. Goal and context of report	17
1.2. Outline of the report	18
2. MCI: Definition and Data Availability	19
2.1. The MCI sector defined.....	19
2.2. ISIC rev3.1 into ISIC rev4	24
2.3. Differences between the old and the new OECD definition and its limitations	24
2.4. Data sources	27
2.5. E-commerce.....	30
2.6. Conclusions.....	31
3. General Statistical Overview of the Media and Content Industries	33
3.1 Introduction	33
3.2 General overview: value added and employment of MCI in Europe	34
3.3 Number of firms.....	41
3.4 Number of employees	44
3.5 Value added	48
3.6 Labour productivity	51
3.7 Example: defining MCI in the Netherlands.....	53
4. Country-specific Overview of the Media and Content Industries	55
4.1. Introduction	55
4.2. Printing, publishing and reproduction of recorded media	55
4.3. Recreational, cultural and sporting activities.....	66
5. Unofficial Statistics	69
5.1. Introduction	69
5.2. Availability of unofficial statistics	69
5.3. Shift from offline to online	71
6. EU 27 Competitiveness and the Single Market	95
6.1 Introduction	95
6.2 Trade balance	95
Appendices	117
A. Detailed description of ISIC rev 3.1 categories.....	117
B. Internal and external EU trade	121
C. 2008 data for ISIC rev4 sectors	122
D. Key figures of major MCI companies in ISIC 62 and 63.....	123
E. R&D expenditures	124
F. Statistical tables of EU Member States	126
G. Selected statistics on Advertising (7440).....	163
H. Bibliography	166

1. Introduction

1.1. Goal and context of report

The first aim of this study, issued by the Institute of Prospective Technological Studies (IPTS) in Seville, is to gain a better understanding of the dynamics in the Media and Content Industries (MCI) and to produce an assessment of the current and future competitiveness of the European MCI sector.

The study is an attempt to better map the economic value and growth potential of this sector, driven by increasing awareness of the economic value of the sector. The sector in itself has shown considerable growth over the past decades, but also contributes to the growth of the Information Society, especially by providing the content which, in digital form, requires high speed broadband networks and thus stimulates the roll-out of broadband networks. The MCI is also an important part of the creative industries, which are seen to stimulate a flourishing creative climate thereby attracting other highly skilled economic activities, leading to vibrant urban economies (Florida, 2002; UNCTAD, 2008; European Commission, 2010a).

The second aim of this study is to gain insight into the fundamental changes in this sector, which have taken place over the past two decades as a result of the introduction of ICT in different parts of the production and distribution process. Some of these technological innovations have been so fundamental that they caused changes in the production chain, in the roles and positions in the value chain, in business models and in market structures. In other words, they have led to a transformation of the whole ecosystem.

In order to achieve a thorough understanding of the MCI, the study will provide:

- A) A quantitative overview of the Media and Content Industries, which includes an industrial and economic quantitative analysis of the MCI sector.
- B) An industrial and economic analysis of the Media and Content Industries, which includes a historical overview and five sub-sector case studies.

This report deals with the quantitative, statistical part of the study. The sub-sector studies are presented in separate reports.

The study contains an economic profile of the Media and Content Industries for the individual EU Member States and for the US, Japan, India and China, and aims to:

- Define and statistically identify the MCI sector (Chapter 2);
- Map and describe the economic profile of the MCI as a whole as well as its sub-sectors in the EU27 on general economic indicators (number of firms, number of employees, value added, GDP/value added, labour productivity, trade balance etc.). For the non-EU countries included in the study (China, India, Japan and US) only some basic economic data are provided (Chapter 3);
- Describe differences between EU Member States in size (value added), share in the total EU value added of the MCI sub-sectors, average annual growth and level of specialisation in particular MCI sub-sectors (Chapter 4);
- Provide some statistics of non-official sources, especially for those aspects which are not covered in the official EU statistics, mainly regarding the impact of ICT on the sector (Chapter 5). More details statistics from those sources are included in the MCI sub-sector studies (in separate report);
- Present figures and tables comparing EU Member States and non-EU countries;
- Present R&D data, only limited data are available (Annex F);

- Present detailed statistical tables for EU Member States (Annex F).

This statistical report is based on official data sources and complemented with data from non-official data sources. Official data sources that are consulted include the Eurostat data for EU Member States, the OECD and national statistical offices (see paragraph 2.4 for further details). In addition, the report will draw on a number of non-official sources which will complement official statistics and contribute to a better analysis and understanding of the economic profile of the MCI sector particularly when describing new developments not (yet) covered by official statistics. We will also provide data from non-official sources to describe some emerging trends regarding the effect of ICT on the MCI industries, but will use these sources mainly for the more detailed sub-sector studies.

1.2. Outline of the report

In Chapter 2 the approach taken in the statistical analysis of the MCI will be explained. The definition of the MCI sector by the OECD and its operationalisation will be discussed, including the limitations of the current definition and operationalisation. The approach taken in the collection of data as well as problems with the availability of data will also be discussed.

The following chapters will present the results of the statistical analysis. First, in Chapter 3, general developments in the MCI sector over the past 12 years are presented. This is followed by a more detailed analysis for each of the sub-sectors in Chapter 4, in which also differences per country are discussed. In Chapter 5 the availability of statistics of non-official sources is discussed, the kind of data that they provide and to what extent these data are complementary to official statistics.

2. MCI: Definition and Data Availability

In order to measure the Media and Content Industries (MCI) sector, a definition of the media and content industry and an operational categorization of media and content activities is required. In this study we use the definition of media and content activities, based on international taxonomies by the OECD (OECD, 2007; OECD, 2009a).

In this chapter we will first present in paragraph 2.1 the most recent definition as suggested by the OECD. The OECD definition is based on a revision of the industrial classification system (ISIC4). This revision has been made to better capture new or growing economic activities such as those in MCI. In the next sections the benefits and limitations of this revision are discussed.

Data collection based on the new ISIC rev 4 classification (and thereby the measurement of MCI) started from 2008 onwards and is therefore insufficient to produce time series. Therefore, the study relies on data that was collected using the ISIC rev 3.1 classification. To be able to make this data useful and more relevant for the analysis and discussion of MCI in this report, the differences between the two definitions will be described (paragraph 2.3) and the ‘old’ ISIC rev 3.1 categories will be converted to the new ISIC rev. 4 categorisation (paragraph 2.2).

2.1. The MCI sector defined

Definitions and official statistical classifications such as those adopted by the OECD and Eurostat often differ from those used in academic literature or by consultancies and research institutes and for relatively new industries such as MCI proper definitions are often lacking. The OECD has developed a first definition of what MCI entails:

“The production (goods and services) of a candidate industry must primarily be intended to inform, educate and/or entertain humans through mass communication media. These industries are engaged in the production, publishing and/or the distribution of content (information, cultural and entertainment products), where content corresponds to an organised message intended for human beings”. (OECD, 2009a)^{3 4}

This definition of the media and content industries is based on an advanced concept of media and content industries. Underlying this definition are the categories from the new statistical classification system for economic activities (ISIC rev.4; United Nations, 2007). Table 1 presents the categories of economic activities which the OECD considers to belong to the Media and Content Industries (OECD, 2009a). It should be noted that most of these industries are already discerned in the existing ISIC 3.1 classification.

³ The OECD defined the Media and Content Industry in the 2007 study: Information Economy – sector definitions based on the International Standards Industry Classification (DSTI/ICCP/IIS (2006)2/final). See also OECD (2009), GUIDE TO MEASURING THE INFORMATION SOCIETY, 2009.

⁴ The Technical Specifications from IPTS for this project translate this definition into: “Establishments involved in the creation and dissemination of information and cultural products”.

Table 1: ISIC rev4 sectoral operationalisation of the definition of the MCI sector by the OECD

581	Publishing of books, periodicals and other publishing activities
5811	Book publishing
5812	Publishing of directories and mailing lists
5813	Publishing of newspapers, journals and periodicals
5819	Other publishing activities
59	Motion picture, video and television programme production, sound recording and music publishing activities
591	Motion picture, video and television programme activities
5911	Motion picture, video and television programme production activities
5912	Motion picture, video and television programme post-production activities
5913	Motion picture, video and television programme distribution activities
5914	Motion picture projection activities
592	Sound recording and music publishing activities
5920	Sound recording and music publishing activities
60	Programming and broadcasting activities
601	Radio broadcasting
6010	Radio broadcasting
602	Television programming and broadcasting activities
6020	Television programming and broadcasting activities
639	Other information service activities
6391	News agency activities
6399	Other information service activities n.e.c.

The sectors that the OECD (2007) has identified as belonging to the MCI are sometimes considered as part of a broader sector labelled as creative industries, which is defined in a DCMS study as *“those industries which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property”* DCMS (2006).

Creative industries have gained policy relevance in recent years as a sector that thrived on the ICT revolution of the eighties and nineties, making new production technologies possible, but also resulting in a whole array of new consumer services. Also, the sector is assumed to create a positive climate for innovation and economic growth, especially in knowledge intensive economies that require high levels of education and innovation. In addition to the media and content sectors the creative industries also include sectors such as the performing arts (EC, 2006), architecture, design and fashion (DCMS, 2001). What distinguishes these latter sectors from the media and content industries as defined by the OECD is that they are generally not distributed through mass communication media.

In other studies the media and the entertainment sectors are grouped together, presumably because both are considered as activities on which consumers spend their leisure time. Often a

clear overall definition of these sectors is lacking, but they are instead described by identifying the economic activities and kind of products and services that are seen to constitute it. The media and entertainment sector as defined by PwC (2007, 2011) for instance includes filmed entertainment, TV, recorded music, radio and out-of-home advertising, internet advertising and access spending, video games, business information, magazine publishing, newspaper publishing, book publishing, theme parks and amusement parks, casino and other regulated gaming and sports. Again some of these sectors would fall outside the OECD's definition, because they are not distributed through mass communication media, such as theme and amusement parks and sports. Also internet access, advertising and games are not included in the underlying OECD categories although (most) advertising and video games fit quite well with the wording of the OECD definition as they are produced for information and entertainment and (often) distributed by mass communication media.⁵ This example shows that not only are the Media and Content industries often subsumed in larger categories (Creative Industries, Media and Entertainment), but also do definitions and the identification of the relevant (sub)sectors (categories) that belong to it vary.

In addition, and more importantly, it has become increasingly difficult to allocate a company to one particular sector of economic activities. Since the 1980s ownership, organisation and the kind of economic activities that traditional mass media communication companies are involved in, have changed. The largest companies are no longer specialized in one product (newspapers, films, broadcast channels, music), but have become large conglomerates (Disney, Murdoch's News Corporation, Bertelsmann, Canal+, Sanoma etc.) that now operate internationally and across a number of different sub-sectors. This horizontal integration was accompanied by processes of vertical integration, where companies increasingly tried to control different links in the value chain, for instance content producers that also distribute their content on international markets, or network providers looking for added value by incorporating media content packagers. This can make it difficult to know in which category a particular company, which is – also - active in the MCI, will be categorized.⁶ Increasingly there are many companies whose core activity has not been media and content, but which are nevertheless performing media and content activities. This is due to, as quantitative economists put it, secondary production. Firms are classified into sectors based on the most important good or service they produce and sell on the market ('specialisation'). This implies that the less important goods and services they produce could belong to other sectors. Those goods and services belonging to other sectors are labelled as 'secondary production'. It is clear that this secondary production of firms (like the construction company that process it's own transport of building materials) could be source of economic change, and lead to a different categorization of the company. The construction company may in this example may

⁵ The OECD itself is also not entirely consistent in separating media and content industries from for instance the telecom and ICT sectors in its publications. For instance; the OECD studies on the Information and Communication Economy (OECD's bi-annual, Information and Communication Outlook) include Broadcasting, Internet and Telecommunication, but not for instance Film or Publishing.

⁶ In order to fit into the statistical constraints, companies are regarded as units. Each unit is a specific entity, which is defined in such a way that it can be recognized and identified and not confused with any other unit. It may be an identifiable legal or physical entity etc. Different types of statistical units meet different needs, so there is no general methodology that can be projected on a certain business. Some examples of units are the enterprise group, the enterprise, the kind-of-activity unit (KAU), the institutional unit or the unit of homogeneous production (UHP).

One NACE code is assigned to each unit recorded in statistical business registers, according to its principal economic activity. The principal activity (does not necessarily account for 50% or more of the unit's total value added) is the activity which contributes most to the value added of the unit. In the simple case where a unit performs only one economic activity, the principal activity of that unit is determined by the NACE category which describes that activity. If the unit performs several economic activities (other than ancillary activities), the principal activity is determined on the basis of the value added associated to each activity.

shift its core activity to a specialized type of transport, while still remaining active in construction, and consequently change from one statistical category to the other: from construction into transport.

The ICT revolution caused similar shifts: telecom companies, specialised in providing wires for telephone calls, started to use their network for data transfer and subsequently also started to provide content. Data transfer and content became their secondary production. As long as these activities stay secondary, they will not show up in the statistics. This will only happen if they become the company's primary activity or if these parts of the company are subcontracted or turned into independent firms. Moreover distribution is not included in the definition of MCI. Although it can be argued that distribution is not production of content, not including these activities in the definition of MCI does mean that an important part of sector dynamics will not be captured. As will be argued in Chapter 5, changes in activities that include distribution have impacted MCI. Digitization of distribution and the companies involved has played an important role in reshaping MCI and a number of new online services such as social networks are not taken into account.

The question of how to demarcate the MCI from other industries and which economic activities and companies to include in this category has thus become even more prominent with the increasing impact of ICT on the MCI and the increasing intertwining of both, previously separate, sectors. In the past two decades, the introduction of ICTs, and in particular of the internet, has caused again some major shifts in the market. In the early nineties ISPs and other internet companies were welcomed as new partners for the media and content industries and e-commerce was announced to become a major sales channel of media and content. Experts predicted that future households would choose their broadband (service) providers as the gateways to a rich array of professionally produced content and therefore ownership of popular content would become a crucial asset. The take-over of Time Warner by internet provider AOL can be explained in this context. The infamous "bubble burst" slowed down, but did not stop this process. Gradually a whole new range of alternative aggregation and distribution platforms has appeared, which might commoditize the traditional media and content industries. The launch of the iTunes Store or more recently Hulu in the US can be seen as examples of industry shifts in this sense. Other major trends have included the rise in mobile media consumption, the entry of new players into the media branch, such as online companies, software and hardware manufacturers (Apple, Nokia, Google, YouTube) and the impact of digital distribution on physical sales. These emerging trends can not be fully captured by the OECD definition of the MCI, as many of these leading companies fall outside the MCI categorization because their prime activity still belongs to another category.

In this report we will nevertheless follow the nature of the OECD definition and its underlying classification (see Table 2), as the OECD and Eurostat (that follows the OECD definition and classification)⁷ are the only sources that provide standardised and comparable statistical data for all European countries on developments in economic sectors. In paragraph 2.2 the shortcomings of this definition will be discussed in more detail. Since data collection based on the new ISIC rev4 (or its equivalent in NACE rev.2) classification of MCI has only been taking place for 2008 onwards, we have been unable to use the ISIC rev4 classification to present time series. Moreover, to correct for a break in time series due to reclassification, more years in the new classification have to be available for proper statistical analysis. Data

⁷ The Eurostat data is based on the European NACE classification for economic activities (commercial and non-commercial), which in turn is based on the international ISIC classification for economic activities of the United Nations.

for the first year in a new classification usually also contains measurement errors; only when having data for more years can one make corrections for these errors.⁸

This study relies on data collected according to the classification ISIC rev3.1, which are data of high quality. In ISIC rev3.1, MCI is composed of the categories presented in Table 2. Annex A contains a detailed description of the ISIC rev3.1 categories and the included activities.

Table 2: ISIC rev 3.1 operationalisation of the definition of the MCI sector by the OECD

221	PUBLISHING, PRINTING AND REPRODUCTION OF RECORDED MEDIA
2211	Publishing of books, brochures and other publications
2212	Publishing of newspapers, journals and periodicals
2213	Publishing of music
2219	Other publishing
64	POST AND TELECOMMUNICATIONS
6420	Telecommunications
72	COMPUTER AND RELATED ACTIVITIES
7221	Software publishing
7230	Data processing
7240	Database activities and online distribution of electronic content
92	RECREATIONAL, CULTURAL AND SPORTING ACTIVITIES
9211	Motion picture and video production and distribution
9212	Motion picture projection
9213	Radio and television activities
9220	News agency activities
9231	Library and archives activities

Keeping economic activity and product accounting up to date with actual developments in the structure of economies and the international consistency of accounting rules is subject to constant debate. On the level of *products* the UN's central Product Classification (CPC) forms the basis of the Classification of Products by Activity (CPA). The EU maintains an inquiry into industrial products for which the Prodcom list of goods forms the basis. However, we proceed here based on *economic activity*. On this level, the United Nations maintains the international standard classification of economic activity ISIC. The European's NACE classification is consistent with ISIC classifications up to two digit level. These classifications are updated on average every decade to account for changes in economic activity induced by the dynamics due to innovation and institutional setting. New activities arise as others become obsolete. Since 2007 the ISIC rev4 applies, consistent with NACE Rev2.

⁸ The basic rule for reclassification is that the overall total does not change, only the distribution over the sectors. Only if the development over more years is available in both classifications, a correction for this change in classification can be constructed. The correction is based then on different shares of a sector in the total in both classifications.

2.2. ISIC rev3.1 into ISIC rev4

Eurostat collects new data every year based on the European NACE classification for economic activities (commercial and non-commercial), which in turn is based on the international ISIC classification by the United Nations. Data based on ISIC rev4 (and equivalent NACE rev2) for 2008 have become available in July 2010, but will not become available for previous years, so no time series can be produced based on the new categorization. This means that for the time series in the statistical analysis only data categorized according to ISIC rev3.1 were available. We therefore have identified the MCI categories in ISIC rev3.1 that are equivalent to those in ISIC rev4, and stay as close as possible to the new and narrow OECD definition of Table 1.

Table 3 shows the bridge-matrix between the new ISIC rev 4 and the ISIC rev 3.1 classification as far as it concerns the MCI industries. Categories 22 and 92 are described on digit level 2 in NACE.

Table 3: Bridgematrix table ISIC rev4 to ISIC rev 3.1 for MCI

ISIC Rev4	Category	ISIC Rev 3.1	Category
5811	Book publishing	2211	Publishing of books, brochures and other publications
5812	Publishing of directories and mailing lists	2211	Publishing of books, brochures and other publications
5813	Publishing of newspapers, journals and periodicals	2212	Publishing of newspapers, journals and periodicals
5819	Other publishing activities	2219	Other publishing
5911	Motion picture, video and television programme production activities	9211	Motion picture and video production and distribution
5912	Motion picture, video and television programme post-production activities	9211	Motion picture and video production and distribution
5913	Motion picture, video and television programme distribution activities	9211	Motion picture and video production and distribution
5914	Motion picture projection activities	9212	Motion picture projection
5920	Sound recording and music publishing activities	2213	Publishing of music
6010	Radio broadcasting	9213	Radio and television activities
6020	Television programming and broadcasting activities	9213	Radio and television activities
6391	News agency activities	9220	News agency activities
6399	Other information service activities n.e.c.	9220	News agency activities

2.3. Differences between the old and the new OECD definition and its limitations

The new classification system (ISIC rev 4) differs in a number of ways from the former system (ISIC rev3.1). In this paragraph, these difference are described in order to fully understand the limitations of the definitions and statistics used in this report.

a) *Telecommunications and software/computer programming* and Media and Content Industries have become separate categories in the new categorization system ISIC rev4 (see Table 4 for the subcategories in Telecommunications and software/computer programming). In the old definition (rev3.1) both were part of the ‘Information Sector’.

Table 4: Telecommunications and Software/computer programming (categories based on ISIC rev4)

61	Telecommunications
611	Wired telecommunications activities
6110	Wired telecommunications activities
612	Wireless telecommunications activities
6120	Wireless telecommunications activities
613	Satellite telecommunications activities
6130	Satellite telecommunications activities
619	Other telecommunications activities
6190	Other telecommunications activities
62	Computer programming, consultancy and related activities
620	Computer programming, consultancy and related activities
6201	Computer programming activities
6202	Computer consultancy and computer facilities management activities
6209	Other information technology and computer service activities

Separating telecommunications, software and computer related activities from media and content industries, and thus excluding distribution of content, for instance cable distribution of TV packages, from the MCI, is justified by the fact that the former categories include a lot of economic activities that are not strictly concerned with producing media or content (as described by the OECD), such as distributing telephone conversations or processing financial information.

At the same time Media and Content Industries are increasingly converging with Information and Communication Technology industries. Telecommunication operators, hardware producers and software producers belonging to the ICT industries are increasingly active in domains that previously belonged exclusively to the media and content industry. Moreover, ICT related activities are increasingly important to MCI in terms of innovation as well as size.

For instance, the gaming industry very well fits the OECD MCI definition, has many activities in common with television and film production and is in many studies considered to be an important part of the media and entertainment industry (See for example PwC, 2011), but is in ISIC rev4 categorized under software and computer programming. This industry is increasing in importance in terms of its rapid overall and expected future growth (IPTS, 2010). Disregarding it as part of the MCI could lead to a serious underestimation of the MCI.

Also online content platforms such as Youtube, Google News, Hulu (and many more) are classified as information technology service activities or information service activities industries and thus not included in the current operationalisation of the Media and Content Industries in ISIC rev4. However, all these companies could be argued to be important to MCI to some extent be it through dissemination and in the production of content (Google collects, structures and hyperlinks to news headlines, Hulu acquires content rights, packages, markets and sells film and TV content, YouTube organises a platform for user generated content as well as professional content and allows for sharing content and user rankings,

which adds value to mere dissemination of the content.), MCI related activities of telecommunications companies (ISIC 61), for example mobile TV services or online and mobile music platforms, are also not included in MCI. Companies in ICT manufacturing (ISIC 263), such as Nokia and Apple also have activities (music platforms) that are closely related to the MCI sector and that are not taken into account in the latest MCI definition. Table 59 and

Table 60 in annex D provide examples of some major European companies associated with the ISIC 61 and 62 categories. The ICT categories do indeed include a number of large companies with activities that would fit in the definition of the media and content industries. However, since media and content production or distribution are not their core activities, these companies are not included in the MCI but in the ICT categories. At the same time the size of these activities could be substantial and excluding these could lead to an underestimation of the MCI.

b) The category *publishing, printing and reproduction of recorded media* (category 221 in ISIC rev3.1) has been divided into three separate categories in ISIC rev4 (1) Printing and reproduction of recorded media, (the manufacturing branch) (2) Publishing of books, periodicals and other publishing activities and (3) Motion picture, video and television programme production, sound recording and music publishing activities. These categories allow for an analysis in more detail than was previously possible under ISIC rev3.1.

c) *Distribution (of most media and content)* is, for most part, no longer included in MCI. The wording of the new OECD definition of the Media and Content Industries includes distribution as part of the Media and Content Industries. However, in the underlying categories, the only distribution activities included are those part of category '5913 Motion picture, video and television programme distribution activities'. In ISIC rev4 distribution is included in category 61 (see Table 4) that refers to companies whose core business is the distribution of video and TV (wired, wireless and satellite telecommunications activities) and thus fall outside the MCI according to the new definition, whereas satellite, cable, wireless and telecom operators are also increasingly involved in the production (or at least in the acquisition of content rights, packaging and marketing) of media and content. For individual companies this might still be a relatively small part of their activities, but for the market as a whole, their importance might be quite substantial.

d) *Distribution of printed books by wholesale and retail* is also no longer taken into account in the ISIC rev4 categorization system. Instead these have become part of a separate category (see Table 5, categories 476, 4761 and 4762) not included in the operationalisation of MCI according to ISIC rev4.

Table 5: Printing, reproduction and retail sale (categories based on ISIC rev4)

18	Printing and reproduction of recorded media
181	Printing and service activities related to printing
1811	Printing
1812	Service activities related to printing
182	Reproduction of recorded media
1820	Reproduction of recorded media
476	Retail sale of cultural and recreation goods in specialized stores
4761	Retail sale of books, newspapers and stationary in specialized stores
4762	Retail sale of music and video recordings in specialized stores

e) The category ‘9231 Library and archives activities’ in ISIC rev3 is no longer included in the new OECD classification. However, libraries and archives are not only distributing content and information but are also increasingly involved in the production of media and content, especially in the online domain by digitizing their catalogues and offering online access to this content to end-users, adding metadata and organising sophisticated search systems, as well as providing the digitized content for the development of new services and user generated content. Thereby they seem to fit under the OECD definition of the MCI. Excluding this category results in an underestimation of the size of the MCI. In the statistics presented in this report the subcategory is part of category 92 in ISIC rev 3.1, but data are not available on this four digit level, so the category can not be described separately.

f) Finally, advertising (Table 6) is a category of economic activity which in many market reports as well as the literature on mass communication is considered to be part of the media industry (European Commission, 2010; PwC, 2011, and seems to fit the wording of the OECD definition, but is not included in the underlying classification, neither in ISIC rev3.1 nor in ISIC rev4. Advertising is not only an industry that produces media content itself, but is also important as a source of income for many media and content products and therefore very much linked to other segments of the Media and Content Industries. This is illustrated in the description of the advertising sector (in both ISIC 3.1 and ISIC 4):

....creating and placing advertising in newspapers, periodicals, radio, television, the Internet and other media, creating and placing of outdoor advertising, e.g. billboards, panels, bulletins and frames, window dressing, showroom design, car and bus carding etc., aerial advertising, distribution or delivery of advertising material or samples.... (United Nations, 2002)

Table 6: Advertising (categories based on ISIC rev4)

731	Advertising
7310	Advertising

g) Data on self-employment / freelancers is not included in the Eurostat data. Although the majority of economic activity will not be impacted too much by this lack of data, in some sectors there seems to be a trend towards more ‘companies’ with fewer employees and indications are a growth of the number of freelancers in the sector.

In order to get an idea of the sectors that cover categories that fit the OECD definition of the MCI, but are not included in the underlying categorization, we will include in the annex of the statistical report selected data for the categories (1) telecommunications and software/computer programming and (2) advertising (included in annex F & G). This enables us to see what effect these categories might have on the size of the MCI and on emerging trends within the MCI.

2.4. Data sources

The ambition of this report is to provide full data coverage of main economic indicators for individual EU Member States:

- Value added
- Number of firms
- Trade

- Employment
- Labour productivity

In general, these indicators are the most widely used macro economic indicators in sector and national comparisons. Value added is defined as gross turnover minus intermediary use and is expressed in Euros. Number of firms is an indication of economies of scale in a sector. In some sectors there are only a few large firms (like oil companies), in other sectors there are many small firms, like in retailing. Trade figures provide an indicator of specialisation. Not all countries do have the same sectors in the same proportions; based on different endowment of production factors, countries and regions specialize in different economic activities. Employment is interesting from a political point of view; from an economic point of view it should be compared with value added. Value added divided by employment results in labour productivity, the key indicator of efficiency and a reflection of the amount and the quality of the inputs (labour, human capital, capital, entrepreneurship).

At this sector level, key data is available in time series from 1995 to 2007 for European Member States. The reason to use this number of years is that it contains a full business cycle, with the result that growth rates reflect structural changes and not just business cycles.

The key data in this study is derived from the following official sources (see also Table 7):

- **Eurostat** offers free access to quantitative data for all EU Member States. It is the main data source for this project. The Eurostat website provides information on Eurostat methodology for data procurement.
- **OECD** has identified the Media and Content industries as important industry sectors driving the Information Society and the roll-out of broadband networks. Among other work in this area it has published a Guide to measuring the information society 2009 (OECD, 2009a). Its yearly Communications Outlook (2009b) and Technology Outlook (OECD, 2008) contain relevant data on sub-sectors of the Media and Communication Industries. The OECD initiated a number of stocktaking reports on sub-sectors of the digital content industries, including scientific publishing, music, online computer games, mobile content, user-created content, digital content and the evolution of the film and video industries and public sector information and content. It also published a report discussing the main business and public policy challenges concerning digital broadband content (OECD, 2006). Some of these studies have been used in the sub-sector studies. The OECD ANBERD database was used to get the most comprehensive data on R&D spending (see Annex E).
- **European Audiovisual Observatory** (EAO or OBS) offers (paid) access to databases on the main audiovisual industries (film, TV and Video/DVD). The EAO also publishes a yearbook on these markets, with European country statistics and profiles. It incidentally publishes other material on for instance games, internet, video-on-demand, records and music industry etc.
- **UNIDO** is the specialized agency of the United Nations that promotes industrial development. UNIDO's statistics branch maintains databases on detailed key industrial statistics with more or less worldwide coverage. This is by default the only data source that provides a similar level of detail as ISIC rev4 and ISIC rev3.1.

The MCI database that was compiled for this report is almost entirely composed of Eurostat data to ensure standardised and comparable data for EU Member States. The data from other sources is often less detailed and of lower quality. Table 7 provides an overview of the data sources that were consulted and provides a description of their quality and of the way they are used in this report. This study relies on two main Eurostat databases:

Structural Business Statistics

This source provides key economic performance data on a very detailed sectoral disaggregation level, but only for the market sectors. In general, non-market (or non-profit) sectors are not covered in this source. The MCI sector is for the largest part a market sector, but since parts of the MCI sector are classified into sector 92 (ISIC 3.1) together with recreation and sports, these economic activities are not covered in the Structural Business Statistics.

National Accounts

National Accounts provide consistent data on key economic performance indicators for all sectors, but only on the two digit level. This source provides data for sector 92 and the overall economy.

Data sources for non-EU Member States

Publicly available, comparable data for the non-EU countries, besides the US, are very poor. For the non-EU countries included in this study - China, Japan and India - the UNIDO database⁹ was used. Although this database provides more (detailed) data than those of the statistical bureaus, it only covers the publishing sectors. Since data for many years and sectors are missing, it was not possible to compose time series or specialisation indices. For the US, the US Census Bureau and the Bureau of Labour Statistics have more detailed and more recent data available for sub-sectors. However, the categories used by both have to be matched with the categories used in this report.

In general, international institutions like the IMF, World Bank, ILO and the OECD do not provide the data necessary for this project, like Eurostat does. So, consistent and standardised data on the MCI sector for the non-EU countries are lacking. For the US data from the US Bureau of Census and the Bureau of Labour Statistics were used, which provide data matching the quality of Eurostat. The NSI's (National Statistical Institutes) of India, China, Russia and Brazil provide data on the two-digit level, which is too aggregated and make it impossible to separate out the MCI categories.

A key problem in the quantitative coverage of sectors over the globe is that an international standard for categorizing sectors is lacking. There are standards, for example the Standard of National Accounts, describing how economic transactions should be accounted. However, sectoral classification schemes vary. Crucial is that the scheme used for classifying economic activities is a reflection of the economy of a country and thereby the information need of a country. For example India has a large agricultural sector and therefore discerns a large number of types of rice and wheat production in its statistics. Statistics on other sectors in India that are still less important to the economy are less well developed. For example statistics on the business services in India are put in one sector, whereas in the Netherlands some 10-15 business services are discerned. MCI is a luxury good; the demand for it rises with income. This means, when the basic needs, like housing and food, are met, people are willing and able to pay for other consumption goods and services. MCI products and services are on the upper end of the demand slope.

⁹ United Nations Industrial Development Organisation, the specialized agency of the United Nations that promotes industrial development for poverty reduction, inclusive globalization and environmental sustainability, in collaboration with the Organization for Economic Cooperation and Development (OECD) compiles, stores and disseminates key industrial statistics.

Table 7: Overview of the sources, the quality of the data

Source	Quality of the data	Data used in this report
Eurostat, epp.eurostat.ec.europa.eu Structural Business Statistics, National Accounts	Good geographical coverage, In ISIC 3.1 data on 4 digit level for sector 22, but only on 2-digit level for sector 92.	All data for EU countries
OECD, www.oecd.org	Data for EU27 same as in to Eurostat.	
National Bureau of Statistics of China	Too aggregated (nine sectors)	
IndiaStat	Too aggregated (hard to check)	Not included
US Bureau of Census	Good	Not included
VN, UNIDO Un.data, www.unido.org , comtrade.un.org , data.un.org	Only data on publishing (22 in ISIC rev 3.1) available	Data for non-EU countries India, US, Japan and China.
National statistical office US www.census.gov	Although data is not available on the same level of detail as for the EU, the available data is of sufficient quality	Auxiliary data VS
National statistical offices China www.stats.gov.cn	Poor coverage; incomplete for many years and sectors	
National statistical office India mospi.nic.in	No data	
National statistical office Japan www.stat.go.jp	Poor coverage; incomplete for many years and sectors	IO tables

- Data on Imports and Exports are only available as net difference or "balance" (i.e. imports minus exports) on 4-digit level. The coverage of the Eurostat data was generally very good. In some individual cases where data are missing for a particular year, country or sector, estimates were made based on the time series to fill the gaps with basic techniques such as linear interpolation and the equivalent distribution method.
- Some data has been extended to the first year (2008) in which the new NACE rev. 2 sector format is used. This data is not appropriate to complement the time series, but it does provide an understanding of the sectors related to TV, radio and film that in the old format were "hidden" in the comprehensive "culture, sport and recreation" sector NACE 92 (see also section 2.6).
- The freely available databases of Eurostat BERD and GERD for R&D data only cover the ICT sector. For data on R&D in the MCI the OECD ANBERD database has been consulted. The ANBERD data provides R&D expenditures for all private sectors on a 2-digit level.

2.5. E-commerce

Some of the most fundamental changes in the MCI sector in the past two decades resulted from digitalisation, the use of internet and the growth in online activities. Therefore it would be interesting to gain insight in the size of online transactions (e-commerce) in the MCI sector, including both the online sale of physical products and services as well as of digital products and services. In recent years, e-commerce has shown unprecedented growth

worldwide. However, even after the introduction of the ISIC rev 4 classification there is still little statistical information available on this development.

The activities of firms involved in e-commerce are measured and classified in the same way as other non-virtual firms. E-commerce does not concern the production of goods and services, but market transactions. Web shops are classified as other retailers; the classification is based on the goods and services that are sold, irrespective of whether this is in digital or physical form.

Accounting of digital transactions

The digitalisation of economic transactions is raising the question of how transactions in a digital, global market are accounted. The accounting of electronic, digital transactions is basically the same as for transactions in the traditional economy. The basic rule is that the transactions are allocated to the country where the owner of the good or service is established. Registration at the Chamber of Commerce is the criterion used to determine where the transaction is considered to take place, not the nationality of the owner. The transaction is accounted to the party who delivers the good or service. A traditional 'brick-and-mortar' shop and a digital web shop are subject to the same rule: the registration of the owner of the transaction (receiver), as well as the status (tourist or company) and the establishment of the receiver of the service.

In the digital economy, the digital purchase of a CD by a Latvian consumer on vacation in Germany is first an expenditure of a Latvian tourist in Germany. The web shop, however, is based on a server in the Netherlands, as well as the registration of the web shop. The delivery is an export of the Dutch economy to a Latvian consumer, even though at the moment of sale the Latvian was a tourist abroad. But, the Dutch web shop is not producing any music, they only import and export. The company bought the CD from the factory in Asia. These are imports to the Dutch economy, and exports from Taiwan. The Taiwanese company, however, has paid for the right to reproduce this music to the owner of the music. That is an American company, who owns the rights to the music. This company, aware of taxes in the US, has registered its company on the Cayman Islands. The revenues of the rights appear in the Cayman Islands National Accounts, where it appears as profit as well as exports of the business services. The transfer of the money to the legitimate owner of the revenue, unknown in this example, appears as a transfer in the income redistribution of the National Accounts of the Cayman Islands and the US, assuming that the owner of the revenues is an US citizen.

The example makes clear that digitization of economic transactions does not create more complications in the accounting framework. But, due to the digitization of the economy, the international trade grew fast. Import and export are growing faster than the growth of value added, due to more international division of labour, lower transport cost and digitalization of transactions.

2.6. Conclusions

The new OECD definition intends to give a better reflection of the current MCI sector structure. However, the underlying categorization of the Media and Content Industries can no account for one of the most apparent trends in the Media and Content Industries, i.e. its increasing interconnectedness and convergence with ICT (telecom, computer and software industries). Distribution is now separated from MCI and included in ICT category, but increasingly distribution companies are involved in acquisition of content and content rights, packaging and marketing of content, sometimes also adding added value by producing additional services (EPG, communication services etc.) The same is true for new entrants such

as major ICT firms like Google, Apple, YouTube, which are also increasingly involved in not just dissemination of content but also in many content related activities.

Also some categories such as advertising and gaming, which can be considered as an important content producing activities are not taken into account. This might lead to substantial underestimation of size and growth in the MCI. In order to provide an impression of their size, some additional statistics on (1) telecommunications and software/computer programming and (2) advertising are presented in Annex F and G. Moreover sector 92 includes activities that are relevant to MCI, but which cannot yet be extracted for time series analysis at this time. Based on the new classification under ISIC rev4 some selected data for 2008 has been included to provide some insight into the size of MCI relevant activities in this large sector 92.

The analysis is mainly built on the available data concerning MCI in the ISIC3.1 classification.

3. General Statistical Overview of the Media and Content Industries

3.1 Introduction

This section aims to provide an overview of the media and content industries (MCI) in Europe. It describes the MCI sector by a number of general economic indicators: (1) number of firms, (2) number of employees, (3) value added, and (4) trade balance. The data was obtained from the Eurostat and Unido¹⁰ databases. Data are available for all the current 27 EU Members States for the period 1995 and 2007.

According to the ISIC rev 3.1 categorization the MCI is comprised of:

- Printing, publishing and reproduction of recorded media industry (category 221), which consists of publishing of books, brochures and other publications, publishing of newspapers, journals and periodicals, publishing of newspapers, publishing of sound recordings and other publishing.
- Recreational, cultural and sporting industry (category 92), including motion picture and video activities, radio and television activities, other entertainment activities,¹¹ together with news agency activities, library, archives, museums and other cultural activities,¹² sporting activities and other recreational activities.¹³

As was already described in Chapter 2, data on recreational, cultural and sporting industry at a disaggregated level (3- and 4-digits) is not available in the Eurostat Structural Business Statistics (SBS) database. Therefore, the recreational, cultural and sporting industry is presented as a whole rather than at disaggregated sub-sector level. The consequence is that the broadcasting and motion pictures industry remains hidden in this broad category. In order to provide a more detailed view on what is and what is not part of MCI, the most recent 2008 data based on ISIC rev 4 has been included. This provides insight in the share of MCI activities within category 92. Use of ISIC rev4 data does not, however, provide the necessary time series data for the period 1995-2007. The reader is referred to Annex F for background tables with country-specific data on general economic indicators.

The indicators that are used in this chapter are value added, employment, firm size and labour productivity. Value added is used because it is the most basic indicator of earnings for specific activities. It is defined as turnover minus cost on the firm level. It can be compared with a country's general economic growth in value added. This key indicator is used in order to observe and to understand the growth level of a sector. Of course, a small sector could easily show large growth figures, and large sectors will often show smaller growth figures. Specialisation indices correct for this phenomenon. This is explained in more detail later on in this chapter.

Besides value added, employment is another important indicator. Employment is the clearest indicator of activity in a sector. The ratio between employment and value added is labour productivity. The higher this absolute ratio is, the higher the use of capital in case of

¹⁰ United Nations Industrial Development Organisation, the specialized agency of the United Nations that promotes industrial development for poverty reduction, inclusive globalization and environmental sustainability, in collaboration with the Organization for Economic Cooperation and Development (OECD) compiles, stores and disseminates key industrial statistics.

¹¹ This sector does not belong to the MCI sector according to the latest OECD definition and its operationalisation in ISIC rev4.

¹² Ditto.

¹³ Ditto.

manufacturing industries or the wages earned if services are involved. A fast growth of this ratio is often seen as an indicator of the adoption of new and more productive capital or innovation.

The last indicator we consider is average firm size; the number of employees divided by the number of firms. This is an indication of economies of scale – the larger the scale, the more economies of scale in the production may be apparent. Moreover, the growth in number of firms gives an indication of new entrants and new entrepreneurship.

Average size does not convey the distribution over the different size classes. However, detailed information on the distribution of firms over different size classes is lacking and therefore we only changes in average size can be displayed.

Gross turnover is not used as an indicator. This indicator is rarely used in national economic outlooks, since it incorporates all intermediate cost of an economy. In other words, it actually contains double counting. Value added is what remains at the end of the day, when all intermediate cost were subtracted from turnover. Next, value added is divided over the owners of capital (interest), labour (gross salaries) and profit (entrepreneurial income).

3.2 General overview: value added and employment of MCI in Europe

This overview starts with the annual average growth rates of value added (prices 2000) and employment (working persons) for the MCI sector and its components relative to the overall economy (Table 8 - Table 14). To take into account the different paths of development for countries, depending on their joining of the EU data is provided for all 27 European countries, the initial 6 countries,¹⁴ the subsequent 9,¹⁵ the total for the initial 15 Member States¹⁶ and the additional countries that joined after that (EU new¹⁷). This grouping expresses GDP per capita: highest in the initial 15 (EU15) and the lowest in the latest countries to join the EU (EU new). This grouping takes into account that countries benefitted from the advantages of the larger internal market in different ways. According to the theory that MCI products and services are luxury goods, it can be expected that the share of MCI in the new access countries with generally lower GDP can be expected to be relatively low. Some of the countries that joined the EU at a later stage have a lower GDP, so in these countries the share of MCI in the entire economy can be expected to be relatively low. However, new Member States with lower GDP also have lower labour cost and can therefore catch up quickly implying high initial growth rates. Moreover growth of MCI in these countries may be spurred by attracting MCI firms from the initial six EU countries.

The entire MCI sector in Europe produced some 213 billion Euros in 2007 (Table 8), whereas the overall value added of the European economy was 9,312.9 billion Euros - nearly one trillion. The majority of the value added of MCI was produced in the EU 6; 112.4 billion Euro. Due the higher GDP per capita in these EU6, demand and therefore the market for these particular goods and services was higher. In the subsequent EU9 also a substantial amount of MCI is produced which can be attributed for a large part to the large market in the UK (see also annex F). In the new entrant countries of the EU after 1990, only 11.6 billion Euro was produced. The largest value added in the new EU countries was generated in Poland (see Annex F).

¹⁴ Belgium, Germany, France, Italy, Luxemburg and the Netherlands.

¹⁵ Denmark, Ireland, the United Kingdom, Finland, Greece, Austria, Portugal, Spain, and Sweden.

¹⁶ EU 6 and EU 9 countries.

¹⁷ Bulgaria, Cyprus, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovenia, Slovakia, and the Czech Republic.

Table 8: Value added 2007 (x billion, overall economy, MCI, Europe)

<i>Value added, absolute</i>	EU27	EU 6	EU 9	EU15	EU new
	<i>Billion EUR</i>				
Total economy	9312.9	5339.9	3425.4	8765.4	547.6
Total MCI	213.2	112.4	89.2	201.6	11.6
Publishing, printing, reproduction of recorded media	43.0	21.8	19.2	41.0	2.0
Publishing of books	10.8	6.1	4.0	10.2	0.7
Publishing of newspapers	15.9	8.1	7.1	15.2	0.7
Publishing of journals and periodicals	13.5	6.4	6.7	13.1	0.5
Publishing of sound recordings	0.9	0.5	0.4	0.9	0.0
Other publishing	1.8	0.6	1.1	1.7	0.1
Recreational, cultural and sporting activities	170.2	90.6	70.0	160.6	9.6

Source: Eurostat.

MCI as a share of the overall economy is more or less the same across Europe. Table 9 shows the share of MCI in the total EU27 economy, publishing, printing and reproduction of recorded media as share of MCI and the share of each of the five subsectors in publishing, printing, reproduction of recorded media.

The share of MCI in the total economy is the highest in the EU9, and, remarkably, the same in the EU6 and the new access countries. In the latter case the variance between individual Member States is larger. When broken down, publishing of newspapers is the largest subsector; 37% of the publishing sector. The share of publishing of books is relatively high in the new access countries; 34%, whereas it is 25% in the EU15. Publishing of journals and periodicals, which can be considered luxury products, is lower in the new access countries (24%), whereas it is 35% in the EU9.

Table 9: Value added 2007 MCI as share of entire economy, 2007

	EU27	EU 6	EU 9	EU15	EU new
Total economy	-	-	-	-	-
Total MCI as share of entire economy	2.3	2.1	2.6	2.3	2.1
Publishing, printing, reproduction of recorded media as share of MCI	20	19	22	20	17
Publishing of books	25	28	21	25	34
Publishing of newspapers	37	37	37	37	36
Publishing of journals and periodicals	32	29	35	32	24
Publishing of sound recordings	2	2	2	2	2
Other publishing	4	3	6	4	4
Recreational, cultural and sporting activities	80	81	78	80	83

Source: Eurostat.

Average annual growth levels of MCI for the EU27 are higher than the overall growth levels (Table 10). An explanation might be that MCI is a luxury good and thus demand for media and content increases as GDP increases. This is a general pattern throughout the EU. The EU9 countries show the largest growth. The entire economy of these countries grew with 3.8% over the 1995-2007 period, while the MCI sector grew with 3.5% a year. Nevertheless, in the EU6 the MCI sector grew 2.4% annually, which is still substantial considering that the absolute value added in the EU 6 is higher. This growth pattern does not imply a large net shift of MCI activities from western towards Eastern Europe; growth of MCI in Eastern European countries does not come at the expense of MCI in western European countries, rather the whole market increases. Publishing is growing slow; slightly above zero in the EU27. It is declining in the EU6, especially newspapers and publishing of sound recordings. Journals and periodicals and other publishing develop faster, especially in the new access countries. The value added of recreation, cultural and sporting activities grew faster than publishing with on average 3.6% a year over the 1995-2007 period.

Table 10: Average annual growth rate overall economy and the MCI sector, 1995-2007

	EU27	EU 6	EU 9	EU15	EU new
	<i>Average annual growth rate</i>				
Total economy	2.6	1.9	3.8	2.6	3.1
Total MCI	2.8	2.4	3.5	2.9	2.4
Total Publishing	0.3	-0.4	1.1	0.3	1.0
Publishing of books	0.8	1.8	-0.3	0.9	0.4
Publishing of newspapers	-1.1	-2.0	0.1	-1.1	-0.5
Publishing of journals and periodicals	1.3	-0.3	2.8	1.2	9.2
Publishing of sound recordings	-0.8	-1.8	0.5	-0.9	5.6
Other publishing	4.1	4.9	5.5	5.3	-6.3
Recreational, cultural and sporting activities	3.6	3.2	4.4	3.7	2.7

Source: Eurostat.

Employment

In 2007 the entire European economy employs some 226 million people (Table 11); the MCI employs 10.8 million people across Europe. More than half of those people are employed in the EU6 (5.3 million); 3.9 million are working in the other 9 countries of the EU15. The new access countries employ 1.6 million people in MCI; in publishing only 121,000 people. The largest countries in terms of number of people employed in MCI are Germany, the UK, France and Italy, all having employment figures in 2007 over 1 million.

Table 11: Employment in MCI, 2007

<i>Employment, absolute</i>	EU27	EU 6	EU 9	EU15	EU new
Total employment (x million)	226.6	103.9	78.0	182.0	44.6
Total MCI (x thousand)	10770.8	5261.5	3899.2	9160.7	1610.1
Publishing, printing, reproduction of recorded media	845.1	384.8	339.7	724.5	120.6
Publishing of books	201.1	89.7	70.9	160.5	40.6
Publishing of newspapers	302.3	136.9	125.9	262.8	39.5
Publishing of journals and periodicals	269.3	134.2	106.0	240.3	29.0
Publishing of sound recordings	21.0	11.4	6.9	18.3	2.7
Other publishing	51.4	12.5	30.0	42.5	8.9
Recreational, cultural and sporting activities	9925.7	4876.7	3559.5	8436.2	1489.5

Source: Eurostat.

The average annual growth rate in employment for the MCI between 1995 and 2007 is 1.9% and thus higher than the 1.1% growth rate for the economy as a whole in the EU27. The growth of employment in the publishing sector in the new access countries is relatively high (Table 12): 2.2% average annual growth, whereas the average growth of this sector in the EU27 is only 0.8%. This is not only an economic catch-up, but can also be attributed to catch-up of free press. The recreational, cultural and sporting activities show a high growth across Europe. In the new access countries this sector grew slower; 1.5% a year. An explanation might be that parts of this sector were institutionalized by the state (such as public service broadcasting) and jobs were provided by the central government. Compared to free market circumstances, this often implies an excess supply, which may explain the slower growth rate of employment compared to value added of this sector after liberalisation of the economy in the new access countries; demand is lagging behind.

Employment growth in the publishing, printing and reproduction of recorded media industries in EU27 is modest with 0.8% annual average growth. This is mainly due to slow growth of publishing of books and a decline in publishing of newspapers. Employment in publishing of journals and periodicals, and in sound recordings grew faster than average, and even faster than employment growth in the entire EU27. However, value added in these subcategories grew slowly or declined, indications of increasing dynamics and competition in these sectors, possibly following the break down of former state monopolies in the new access countries. Excess profits and thereby high value added made by these monopolies are no longer sustained in a competitive market. This trend is also illustrated when the shares of the MCI

and its subsectors are normalized into specialization indices (Table 13), indicating the reliance of economies on a specific sector.

Table 12: Employment, average annual growth rate, 1995-2007

	EU27	EU 6	EU 9	EU15	EU new
Total employment	1.1	0.9	1.7	1.2	0.7
Total MCI	1.9	1.9	2.1	2.0	1.6
Publishing, printing, reproduction of recorded media	0.8	0.4	0.7	0.6	2.2
Publishing of books	0.6	0.6	0.1	0.4	1.3
Publishing of newspapers	-1.4	-2.7	-0.5	-1.7	1.2
Publishing of journals and periodicals	3.7	5.0	2.1	3.6	5.2
Publishing of sound recordings	2.6	2.3	2.9	2.6	3.1
Other publishing	3.7	4.0	3.8	3.8	3.3
Recreational, cultural and sporting activities	2.0	2.0	2.2	2.1	1.5

Source: Eurostat.

The specialisation index takes the share of a sector in the entire European economy as a baseline (=100). The share of a region or country is compared to this baseline and adjusted accordingly. A larger share means that the sector is overrepresented and a smaller share means that it is underrepresented compared to the European baseline. From an economic point of view, an overrepresentation means that there can be a comparative advantage. A change of the specialization index means that comparative importance is getting stronger or weaker over time.

Publishing is overrepresented in the EU9 (mainly due to Denmark, Sweden, and Finland) and underrepresented in the new access countries (Table 13), likely due to the fact these countries have had a lack of free press and free market economy. It is the EU9 where the publishing sector is really strong. This can be largely attributed to the large UK market,¹⁸ where a number of large publishers of the English-speaking world are concentrated. Denmark, Finland and Sweden also have a relatively high specialisation index for publishing, but this is decreasing particularly in Denmark and Finland. In the EU9 this advantage especially applies to the publishing of journals and periodicals. In the new access countries, all publishing is underrepresented, especially journals and periodicals and newspapers.

¹⁸ In terms of number of firms, people employed and value added.

Table 13: Specialisation index 2007, based on employment figures

	EU27	EU 6	EU 9	EU15	EU new
	<i>Specialisation index</i>				
Total economy					
Total MCI	100	107	105	106	76
Publishing, printing, reproduction of recorded media	100	100	110	105	81
Publishing of books	100	97	102	99	102
Publishing of newspapers	100	99	121	108	66
Publishing of journals and periodicals	100	109	114	111	55
Publishing of sound recordings	100	119	95	109	65
Other publishing	100	53	169	103	88
Recreational, cultural and sporting activities	100	107	104	106	76

Source: Eurostat.

The relative changes of the specialization indices reveal a striking pattern (Table 14). In the new access countries publishing gains importance for the economy; the specialization index for publishing increases. This applies especially to the publishing of newspapers. This pattern is clearly recognizable in Poland, Estonia, Czech Republic, Bulgaria and Hungary.

In the EU6, the economic heartland of the EU, the specialization index of newspapers and sound recordings is declining, whereas the publishing of journals and periodicals is increasing. The specialization index of the recreational, cultural and sporting activities is on the rise in the EU6, but declining in the EU9 and the new access countries.

Table 14: Change of specialisation index 1995-2007, based on employment figures

	EU27	EU 6	EU 9	EU15	EU new
	<i>Change of specialisation index</i>				
Total economy	-	-	-	-	-
Total MCI	0	2	-5	-1	1
Publishing, printing, reproduction of recorded media	0	-4	-9	-6	22
Publishing of books	0	3	-13	-3	13
Publishing of newspapers	0	-14	5	-6	21
Publishing of journals and periodicals	0	17	-34	-4	11
Publishing of sound recordings	0	-1	-3	-2	7
Other publishing	0	3	-11	0	0
Recreational, cultural and sporting activities	0	3	-4	0	-1

Source: Eurostat.

3.3 Number of firms

Table 15 presents an overview of the number of firms active in the MCI sector, together with their share in the total publishing industry, the annual average growth rate in number of firms, the average firm size and the annual average growth rate of firm size. No Eurostat data is available for the number of firms in recreational, cultural and sporting activities.

The average firm in the publishing sector has approximately 10 employees, which is small according to Eurostat criteria.¹⁹ The variation in average firm size between sub-sectors is large. On average, firms that publish newspapers are relatively large (33.6 employees) compared to firms that publish music recordings (1.8 employees). The publishing sector does not appear to evolve towards a larger firm size, which could be expected based on potential economies of scale. Instead, the average firm size decreased on an annual basis by 3.1 employees between 1995 and 2007. The average firm size in all sub-sectors, except for the publishing of journals and periodicals, decreased each year. The size of firms that publish newspapers decreased most dramatically over the 1995-2007 period, due to increased competition and declining advertising revenues, titles and circulation and declining readership (OECD, 2010). In 1995, an average newspaper publisher had 49.5 employees. This number decreased to 33.6 employees in 2007. The number of firms grows, but the average firm size

¹⁹ According to Eurostat, a small enterprise has less than 50 employees, a medium enterprise has 50-250 employees and a large enterprise has more than 250 employees.

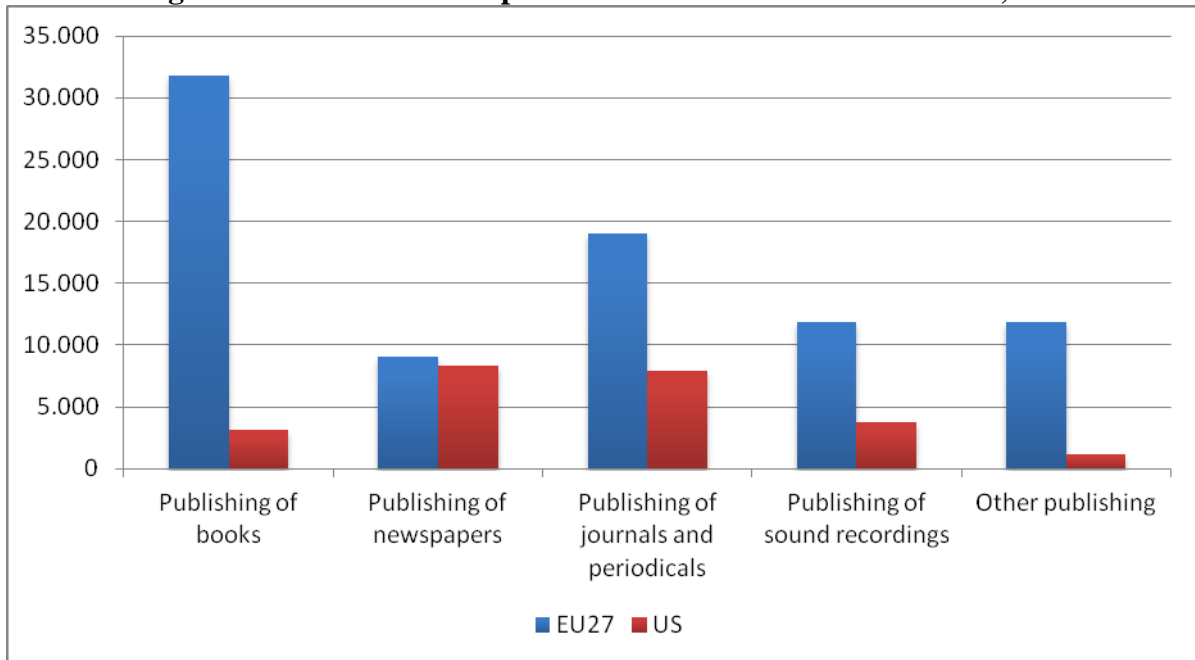
shows a decline for all sub-sectors, especially sharp in the sub-sector publishing of newspapers. The number of firms in the publishing sector grew more than the total number of firms in the EU economy; however, the decrease in the average firm size was also larger for the publishing sector.

Table 15: Number of firms, share in total publishing industry, annual average growth rate, average firm size and growth in firm size for the EU27 publishing industry 2007

	<i>Number of firms</i>	<i>Number of firms</i>	<i>As share of total Publishing</i>	<i>Annual average growth rate between</i>	<i>Average firm size</i>	<i>Average firm size</i>	<i>Annual average growth firm size</i>
	<i>Number</i>	<i>Number</i>	<i>%</i>	<i>%</i>	<i>Number</i>	<i>Number</i>	<i>Number of employees</i>
	<i>2007</i>	<i>1995</i>	<i>2007</i>	<i>1995-2007</i>	<i>2007</i>	<i>2005</i>	<i>1995-2007</i>
<i>Total publishing</i>	<i>83,472</i>	<i>58,219</i>					
Publishing of books	31,813	22,347	38.1	3.0	6.3	8.4	-2.1
Publishing of newspapers	9,006	7,251	10.8	1.8	33.6	49.5	-15.9
Publishing of journals and periodicals	18,975	16,354	22.7	1.2	14.2	10.6	3.6
Publishing of sound recordings	11,833	4,982	14.2	7.5	1.8	3.1	-1.3
Other publishing	11,845	7,284	14.2	4.1	4.3	4.5	-0.2
Total publishing sector	83,472	58,219	100	3.0	10.1	13.2	-3.1
Total EU economy	20,865,302	16,175,213		2.1	10.1		-1.4

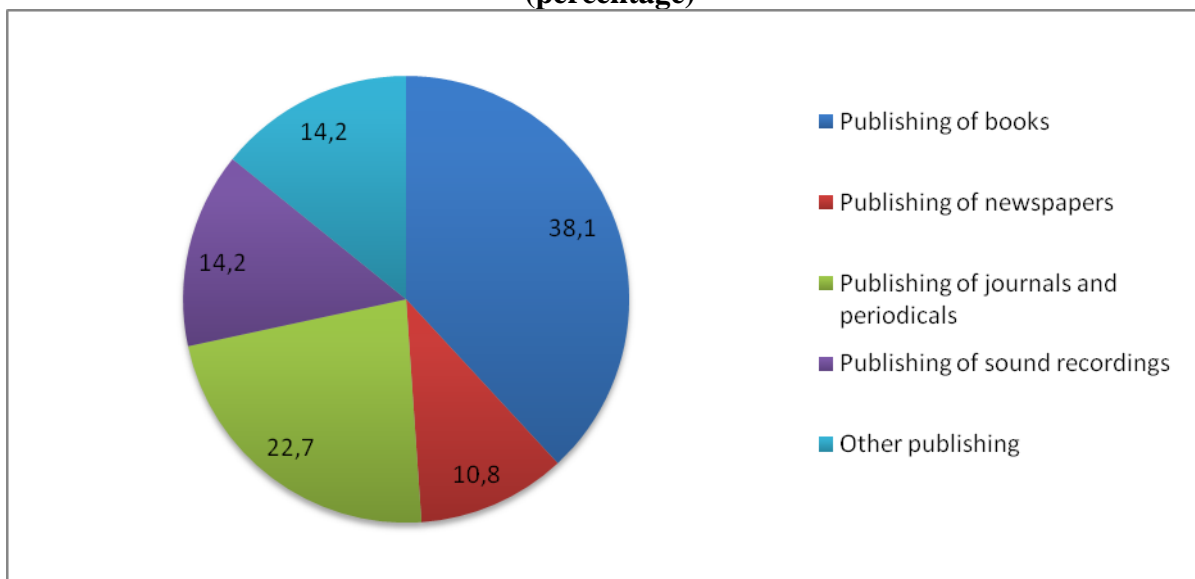
Source: Eurostat.

Figure 1 provides an overview of the number of enterprises in EU27 as well as in the US. In terms of the number of enterprises there are fewer enterprises in the US than there are in EU27. This might be explained by the fact that the US is one market, legally, economically as well as culturally, thereby creating potential for economies of scale and scope. The difference between the US and the EU27 is less in the publishing of newspapers, which might be explained by the regional and local nature of much newspaper publishing in the US.

Figure 1: Number of enterprises in EU27 and the United States, 2007

Source: Eurostat and US Census.

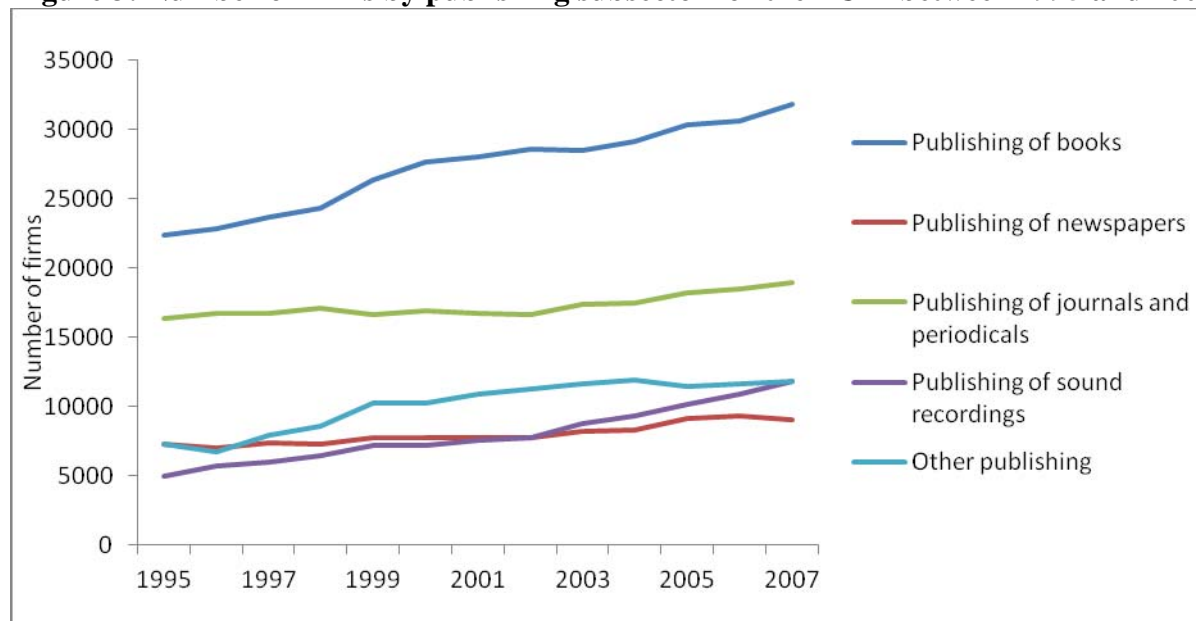
The European publishing industry encompasses a total of 83,472 firms which is far more than the four biggest other economies together. Figure 2 shows the share of each sub-sector in the publishing industry based on the number of firms in 2007. The largest sub-sectors in terms of number of firms are the publishing of books (31,813 or 38.1%) and the publishing of journals and periodicals (18,975 or 22.7%), which includes magazines. Together, these sub-sectors represent more than 60% of the firms in the publishing industry. Publishing of newspapers is in number of firms the smallest sub-sector, with only 9,006 firms in EU27, equivalent to a share of 10.8%.

Figure 2: Share of each sub-sector in the total EU27 publishing industry in 2007 (percentage)

Source: Eurostat.

The average annual growth rate of the number of firms between 1995 and 2007 was 3% (Figure 3). There are remarkable differences between the publishing sub-sectors. In particular, the number of firms in the publishing of journals and magazines and the publishing of newspapers grew with only 1.2% and 1.8% respectively, which is far below the average of the publishing industry as a whole. The number of firms that publish sound recordings has grown annually with a rate of 7.5%. The number of firms that publish books and sound recordings showed a remarkable growth between 2003 and 2007. In contrast, the number of firms in the publishing of news industry decreased between 2005 and 2007.

Figure 3: Number of firms by publishing subsector for the EU27 between 1995 and 2007



Source: Eurostat.

3.4 Number of employees

Table 16 provides an overview of the number of employees in the MCI, the share of sub-sectors in MCI as a whole and the annual average growth in employment for each sub-sector.

The MCI employs a total of 10.8 million workers in the EU27. A very large majority (92.2%) of these employees work for firms in the recreational, cultural and sporting activities sector. The publishing industry has only a small share of 7.8% of all employees active in the MCI sector, equalling around 850,000 employees in the EU27. This large difference in number of employees between the two sectors is also shown in Table 16. However, based on 2008 data based on the ISIC rev4 definition approximately only 10% to 20% of employment in the recreational, cultural and sporting activities sector in 2008 can be attributed to MCI relevant activities. If this percentage is projected on the 2007 data, this would mean that the recreational, cultural and sporting activities sub-sector comprises approximately 64%, whereas the publishing sector would amount to 36% of total employment in the MCI sector.

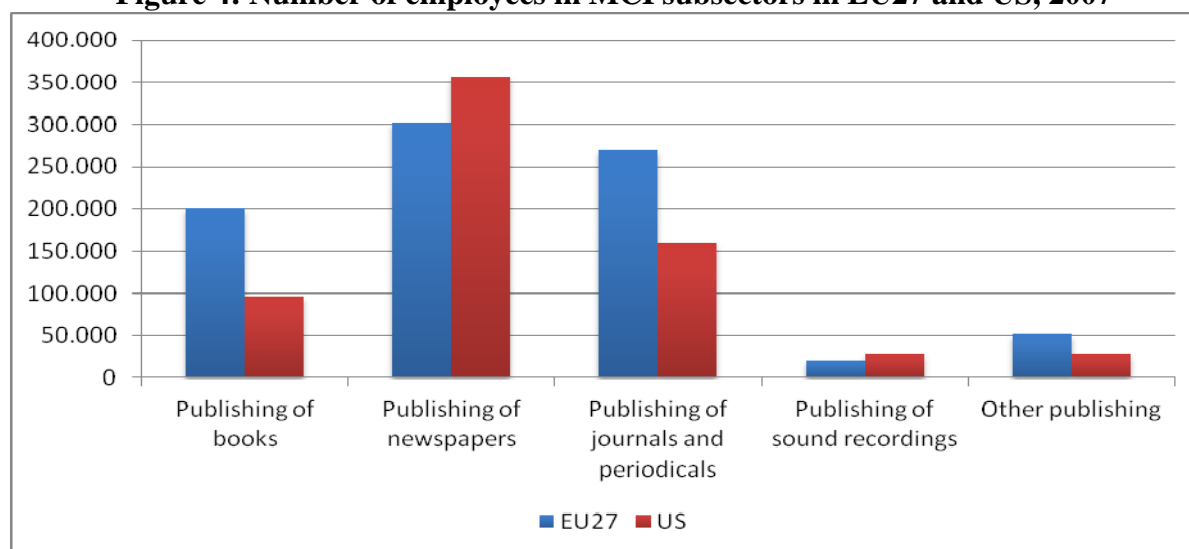
In terms of employment growth, most publishing sub-sectors show a much stronger employment growth than the EU economy as a whole. Only for publishing of books (increasing only 0.6%) and newspapers (decreasing by 1.4% annually) the reverse was true. The sub-sectors publishing of journals and periodicals, and the category other publishing showed the biggest growth with 3.7% more employees each year.

Table 16: Number of employees, share in total publishing industry and annual average growth rate for the EU27 publishing industry

	<i>Number of employees</i>	<i>Number of employees</i>	<i>As share of total MCI</i>	<i>Annual average growth rate</i>
	<i>Number</i>	<i>Number</i>	<i>%</i>	<i>%</i>
	2007	1995	2007	1995-2007
<i>Total publishing</i>	845,123	768,588	7.8	
Publishing of books	201,100	188,015	1.9	0.6
Publishing of newspapers	302,300	358,716	2.8	-1.4
Publishing of journals and periodicals	269,300	173,388	2.5	3.7
Publishing of sound recordings	21,023	15,407	0.2	2.6
Other publishing	51,400	33,062	0.5	3.7
Recreational, cultural and sporting activities	9,925,700	7,805,153	92.2	2.0
Total Media and Content Industries	10,770,823	8,573,742	100.0	1.9
Total EU economy	226,604,600	198,449,200		1.1

Source: Eurostat.

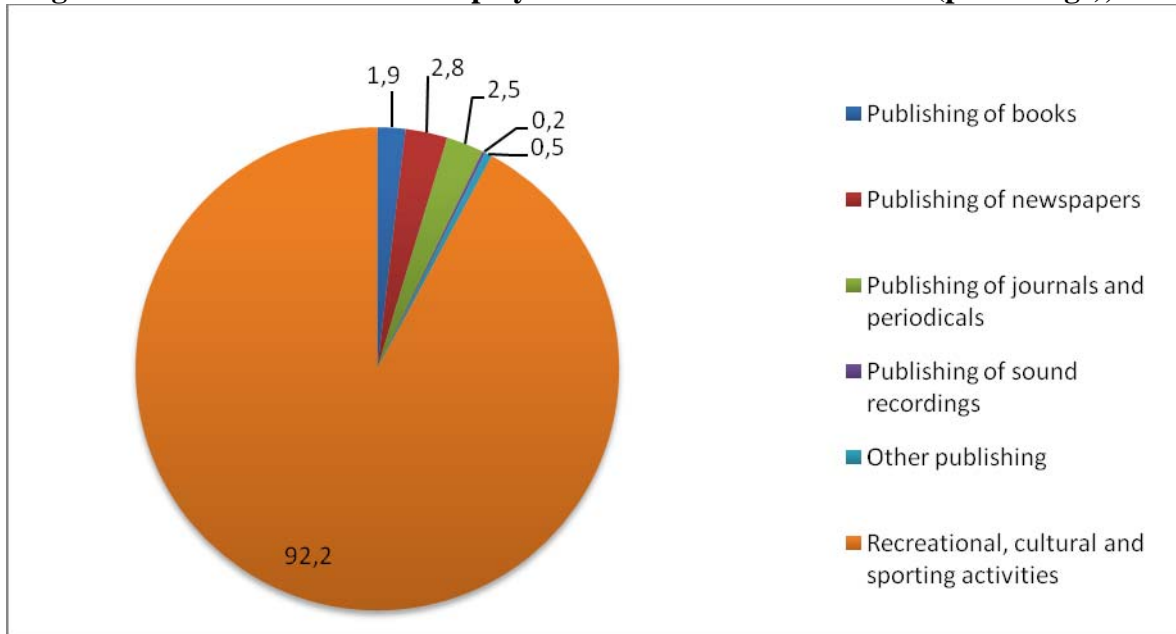
Figure 4 provides an overview of the number of employees in MCI subsectors in the EU27 and the US in 2007. For a number of subsectors the number of employees in the EU27 is larger than the number of employees in the US, however, in publishing of newspapers and publishing of sound recordings this is not the case. Considering that the number of enterprises in publishing of news is similar between the EU27 and the US, this means companies in the US on average employ more people. For sound recording this is certainly the case; the number of enterprises in the US is much lower, while the number of employees is higher. For this subsector economies of scale are most certainly relevant considering the large domestic as well as international market, and thereby one would indeed expect fewer but larger companies than in EU27.

Figure 4: Number of employees in MCI subsectors in EU27 and US, 2007

Source: Eurostat and US Census.

Although the publishing of books sub-sector has by far the largest number of firms in the publishing industry (see section 0), there are more employees in the publishing of newspapers, journals and periodicals. These sub-sectors are more labour-intensive. Most employees in the publishing industry work for the publishers of newspapers (302,300); in publishing of sound recordings the lowest number of workers can be found. The differences between the publishing industry and the recreational, cultural and sporting industry – which also includes MCI relevant activities - are visualised in Figure 5.

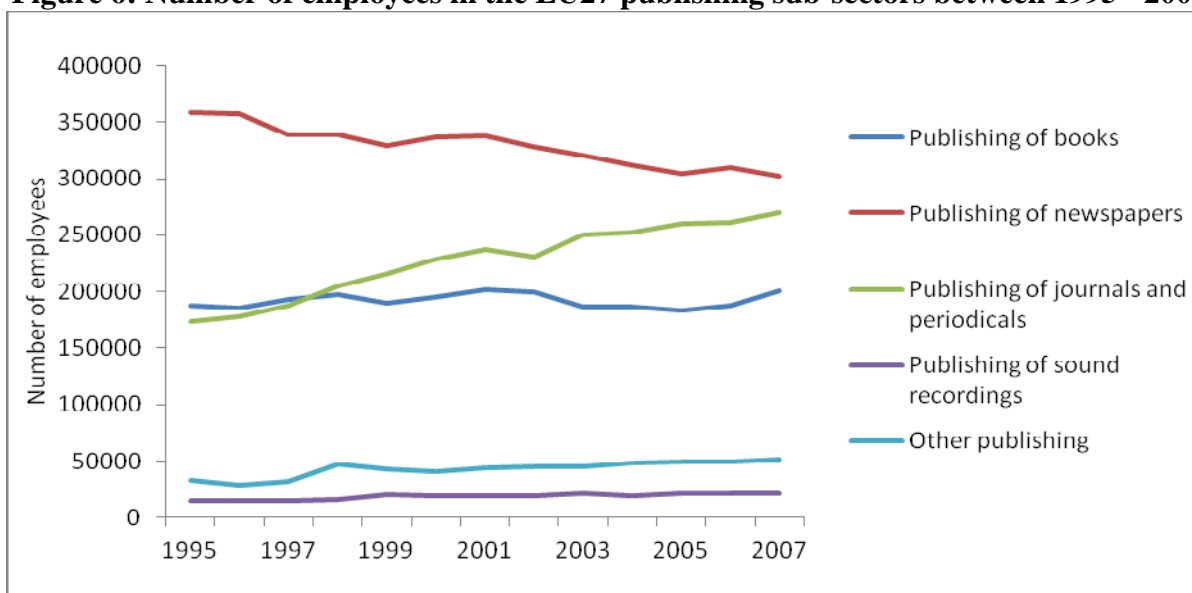
Figure 5: Share of number of employees in the MCI sector in 2007 (percentage), EU27



Source: Eurostat.

The number of employees in the MCI sector has been growing with an average rate of 1.9% between 1995 and 2007. Figure 6 shows the average growth rates for the sub-sectors in the publishing industry and Figure 7 shows the same figure for the recreational, cultural and sporting industry.

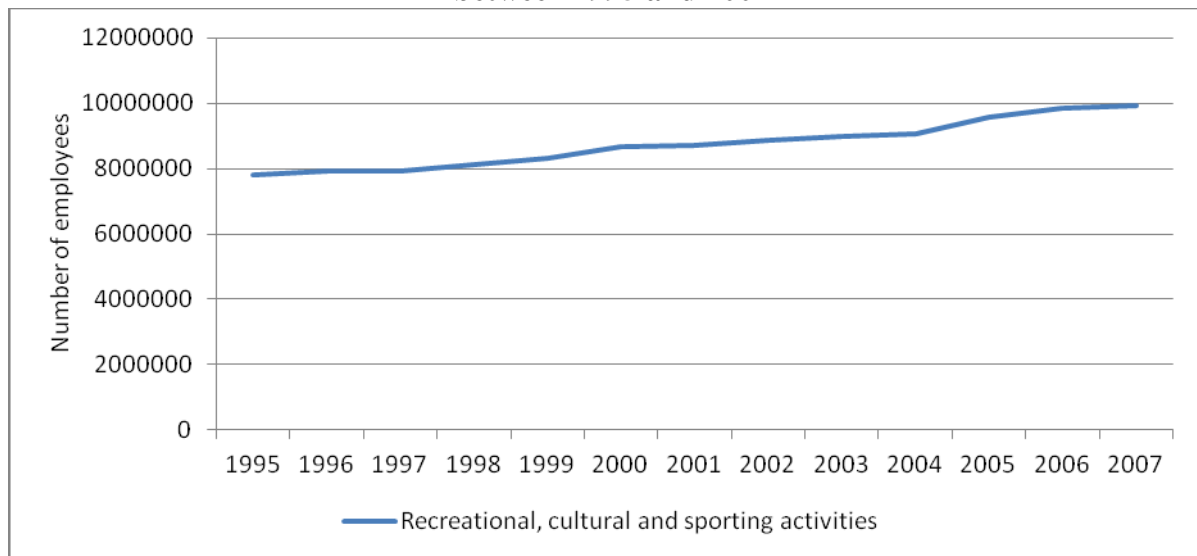
Figure 6: Number of employees in the EU27 publishing sub-sectors between 1995 - 2007



Source: Eurostat.

Like the publishing industry in general, the number of employees in the recreational, cultural and sporting industry has been growing steadily between 1995 and 2007. On average, the number of employees in this industry grew with 1.9%. It should be noted, however, that only a part of employment in this sub-sector can be attributed to MCI.

Figure 7: Number of employees in the EU27 recreational, cultural and sporting industry between 1995 and 2007



Source: Eurostat.

Comparable standardised statistics on MCI in Japan, China and India are hardly available. Table 17 provides an overview of data that is available from the UNIDO database for the year 2001. It shows the number of firms and number of employees in non-EU countries. In all sub-sectors Japan had the largest number of firms, and in most the largest number of employees. In Publishing of newspapers, publishing of journals and periodicals China had the lowest number of firms but a considerable larger number of employees than in the India and Japan.

Table 17: Number of firms and employees, share in total publishing industry for the publishing industry in China, India and Japan 2001

		<i>Number of firms</i>	<i>Number of employees</i>
		<i>Number</i>	<i>Number</i>
		2001	2001
Publishing of books			
	China	190	8,800
	India	172	7,495
	Japan	1,628	47,572
Publishing of newspapers, publishing of journals and periodicals			
	China	80	121,000
	India	379	41,132
	Japan	770	63,772
Publishing of sound recordings			
	China	30	NA
	India	50	NA
	Japan	100	NA
Other publishing			
	China	25	1,500
	India	101	4,744
	Japan	125	0

Source: Unido.

3.5 Value added

The economic indicator value added is defined as the gross income from operating activities after adjusting for operating subsidies and indirect taxes.²⁰ Table 18 provides an overview of the value added in the MCI sector and its underlying industries. The recreational, cultural and sporting industry, which encompasses broadcasting and motion picture, is by far the largest industry in terms of value added. It accounts for about 170 billion EUR in 2007 (almost 80% of total value added generated in MCI). In contrast, the European publishing industry had a

²⁰ See Eurostat Structural Business Statistics.

value added of 43 billion EUR in 2007. However, new ISIC rev4 data reveal that in 2008, only approximately 30% of value added in this category (92) can be attributed to MCI. If this is projected on the 2007 data, category 92 activities relevant to MCI constitute 54.3% of total value added in MCI.

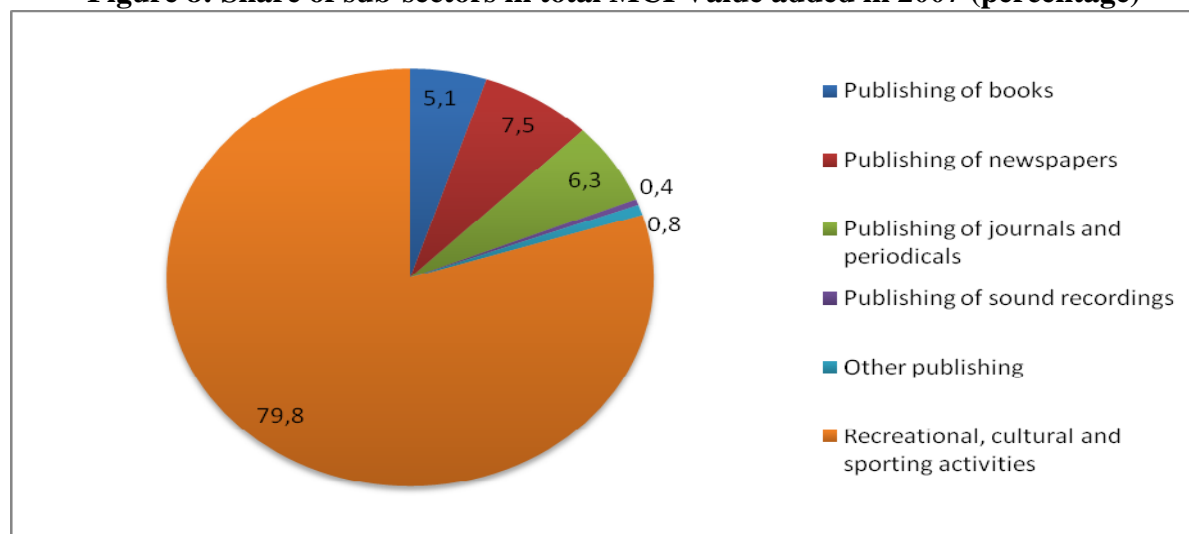
Table 18: Value added, share in total MCI industry and annual average growth rate for the EU27 MCI industry

	<i>Value added</i>	<i>Value added</i>	<i>As share of total MCI</i>	<i>As share of total MCI</i>	<i>Annual average growth rate</i>
	<i>Million EUR</i>	<i>Million EU</i>	<i>%</i>	<i>%</i>	<i>%</i>
	2007	2005	2007	2005	1995-2007
<i>Total publishing</i>	42,958	41,516	20.2	27.2	
Publishing of books	10,826	9,780	5.1	6.4	0.8
Publishing of newspapers	15,898	18,075	7.5	11.8	-1.1
Publishing of journals and periodicals	13,534	11,543	6.3	7.6	1.3
Publishing of sound recordings	943	1,038	0.4	0.7	-0.8
Other publishing	1,757	1,080	0.8	0.7	4.1
Recreational, cultural and sporting activities	170,221	111,017	79.8	72.8	4.1
Total Media and Content Industries	213,177	152,534	100	100	2.8
Total EU economy	9,312,928	6,819,013			2.3

Source: Eurostat.

Figure 8 shows the shares of the individual sub-sectors in total MCI value added. In 2007 the recreational, cultural and sporting industry had a share of 79.8% of value added. The largest sub-sectors in the publishing industry were the publishing of newspapers (7.5%), publishing of journals and periodicals (6.3%) and the publishing of books (5.1%). The publication of sound recordings (0.4%) and other publishing (0.8%) were the smallest sub-sectors, based on value added as well as employment.

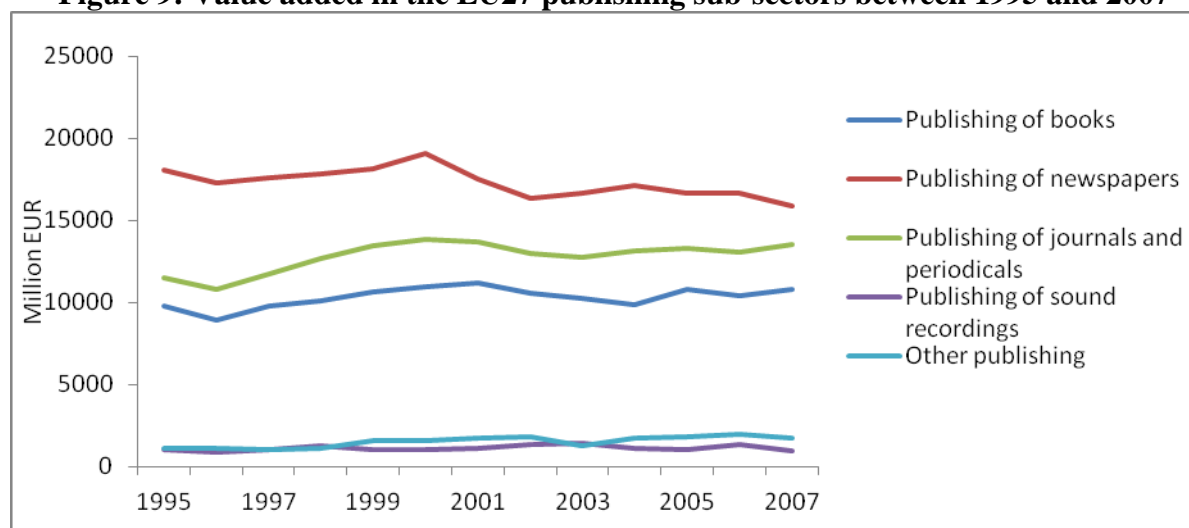
Figure 8: Share of sub-sectors in total MCI Value added in 2007 (percentage)



Source: Eurostat.

Figure 9 shows the value added in the publishing industry over a period of 12 years (from 1995 and 2007). The graph clearly shows that the value added generated by European newspaper publishers has been decreasing since 2000. This is consistent with decreasing circulation and readership, among others due to competition by other sources of information such as the internet and free newspapers.²¹ Other publishing sectors, such as books and periodicals, have succeeded in stabilizing their value added after the year 2000, with slight growth again as from 2005.

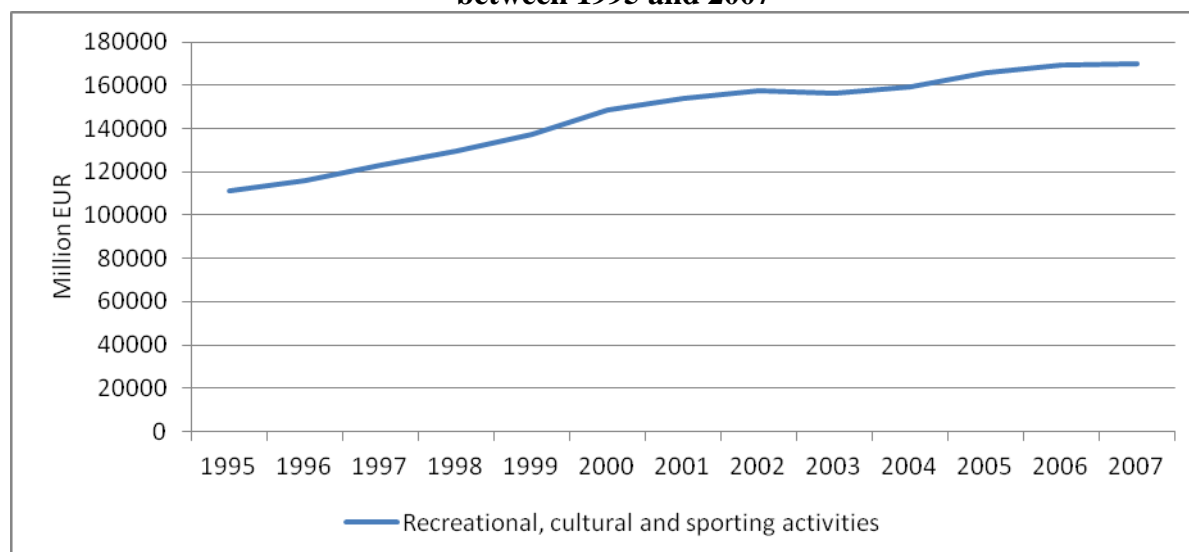
Figure 9: Value added in the EU27 publishing sub-sectors between 1995 and 2007



Source: Eurostat.

Value added in the recreational, cultural and sporting industry in Europe has been strongly rising until 2000, and has stabilised since then, to regain growth again as from 2004 onwards (see Figure 10). Only part of value added of this subsector can be attributed to MCI, 30% in 2007, but there is insufficient data to determine this percentage for other years or to determine growth rates.

Figure 10: Value added in the EU27 recreational, cultural and sporting industry between 1995 and 2007



Source: Eurostat.

²¹ For a detailed description of developments in news publishing see the sub-sector study on news.

3.6 Labour productivity

Labour productivity is calculated by dividing value added at factor costs by the number of employees. Table 19 shows the labour productivity in thousands of EUR and growth rate in percentage for the different MCI sectors in the EU27. The annual average growth rate is calculated for a 12-year time period (1995-2007).

On average, the average labour productivity of MCI was 19,800 EUR per employee in 2007, which was not even half of the average labour productivity in the EU economy as a whole (41,100 EUR). However, it should be taken into account that approximately 80% of this (weighted) figure can be attributed to the recreational, cultural and sporting industry and only 20% to the publishing industry. The latter has a much higher labour productivity of an average of 50,800 EUR against 17,100 EUR in the recreational, cultural and sporting industry. Within the publishing industry, differences in labour productivity also exist between the sub-sectors, but to a much smaller extent. The publishing of books and the publishing of newspapers seem to be the most capital-intensive sub-sectors, with a relatively high labour productivity of respectively 53,800 EUR and 52,600 EUR. In publishing of sound recordings and other publishing labour productivity is with 44,800 EUR lower, but still higher than the overall EU average labour productivity.

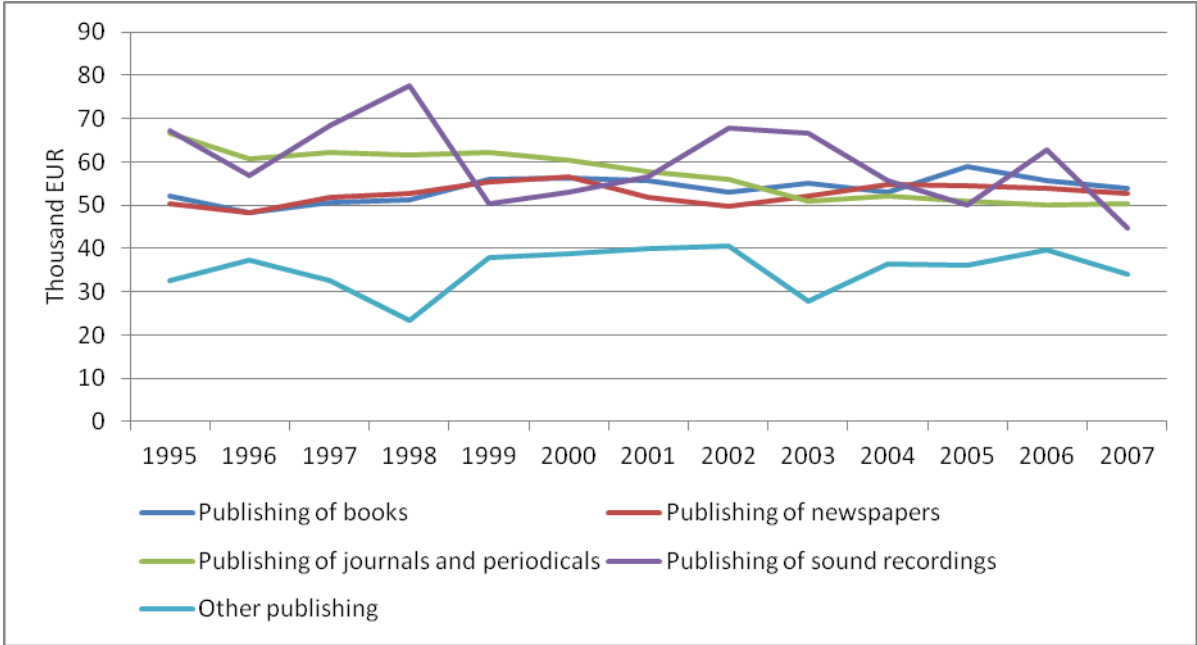
Table 19: Labour productivity and annual average productivity growth for the EU27 MCI industry

	<i>Labour productivity</i>	<i>Labour productivity</i>	<i>Annual average growth rate</i>
	<i>Thousand EUR</i>	<i>Thousand EUR</i>	<i>%</i>
	2007	1995	1995-2007
<i>Total publishing</i>	50.8	54.0	
Publishing of books	53.8	52.0	2.6
Publishing of newspapers	52.6	50.4	2.4
Publishing of journals and periodicals	50.3	66.6	-0.3
Publishing of sound recordings	44.8	67.3	-1.4
Other publishing	34.2	32.7	3.0
Recreational, cultural and sporting activities	17.1	14.2	4.2
Total Media and Content Industries	19.8	17.8	3.4
Total EU economy	41.5	34.4	1.5

Source: Eurostat.

The labour productivity in the publishing of books and the publishing of newspapers has grown since 1995 with an average annual growth rate of around 2.5% (Figure 11). The publishing of newspapers had a drop in labour productivity between 2000 and 2002, whereas the publishing of books seems to experience a drop in recent years. Publishers of journals and periodicals and publishers of sound recordings suffered from a minor (-0.3% and -1.4%) decrease in labour productivity between 1995 and 2007.

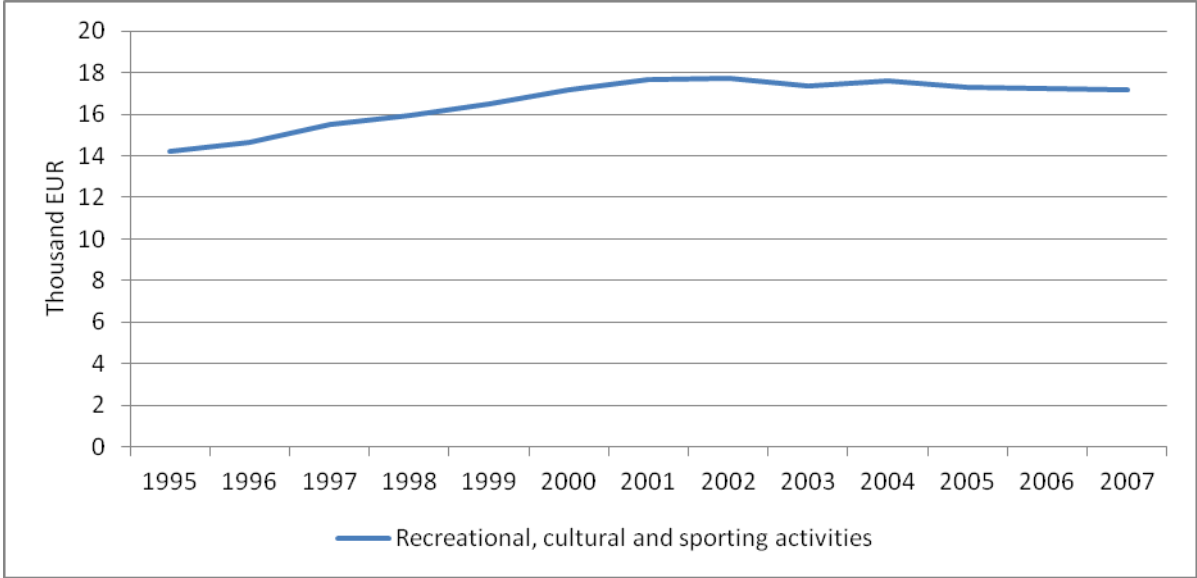
Figure 11: Labour productivity in the EU27 publishing sub-sectors between 1995 and 2007



Source: Eurostat.

Figure 12 plots the labour productivity of the European recreational, cultural and sporting industry for the period 1995-2007. As this industry is much larger than each of the individual sub-sectors of the publishing industry, the variance in labour productivity is relatively stable. The labour productivity has been growing with an average annual growth rate of 4.2%, or a noticeable overall growth of 27% between 1995 and 2007.

Figure 12: Labour productivity of the EU recreational, cultural and sporting industry, 1995-2007



Source: Eurostat.

3.7 Example: defining MCI in the Netherlands

In this section we will discuss the definition of the Media and Content Industries (MCI) in the Dutch context. In the Netherlands extensive analysis has led to a very precise definition and measurement of MCI by deconstructing the 'large' sector 92 and determining activities relevant to MCI.

Measurement: methodology

The MCI in the Netherlands is measured by combining two specific sources:

1. National Accounts.
2. LISA: a national registration of firms and employment.

The first source provides consistent national data on macro-economic variables like value added, employment, fulltime equivalents, intermediary use, exports on the sector 2-digit level (over 100 sectors). This breakdown is still too aggregated to discern the MCI according to the OECD or any other concept of the creative industries. The second source is providing more detailed information. This source is primarily based on registration of firms at the Chamber of Commerce. This provides information of the address of the firm, the kind of economic activity and the number of employees. So, all firms (and other organizations) can be discerned on a very detailed (4 digit) level by zip-code (6 digit). All kinds of aggregations can be made from this detailed level. This implies that the sectors on the 2-digit level as the National Accounts provides them, can be broken down with the help of LISA. So, it is exactly known how MCI developed over the years in the Netherlands and its regions.

MCI and ICT in the Netherlands

TNO has been monitoring and evaluating the size and economic performance of the MCI and ICT sectors in the Netherlands since the early 2000s, developing the first operational definition of the MCI sector in 2004 (Rutten e.a., 2004). This definition was based on the standard business classification (Standaard Bedrijfs Indeling (SBI)) applied by Statistics Netherlands (CBS). The SBI classification of 1993 was used for the first operational definition. Keeping national classification consistent with the NACE classification is compulsory for EU member states. The 1993 SBI classification was thus consistent with NACE Rev.1.1. ISIC Rev. 4 and NACE Rev. 2 led CBS to identify a new SBI classification, SBI 2008. Taking this classification as the starting point, TNO maintained its initial definitive description of the creative industries. In this approach creation, production and exploitation of creative products are viewed as separate activities. This definition differs somewhat from the OECD definition, as the latter does not distinguish between creation and production.

The MCI sector is divided into three subsectors: *arts and cultural heritage*, *media and entertainment* industry, and *creative commercial services*. The ICT industry is divided in the *content*, *services* and *hardware* industries, respectively (see Koops et al, 2009, for a 4 digit economic activities classification).

The MCI and ICT sectors featured about half a million jobs in 2009, growing beyond the national average between 1996 and 2009. Notably the MCI sectors have been growing rapidly, at 3.4% per annum. In both the MCI and ICT sectors, the downward business cycle trend showed by the national economy was followed in the 2007-2009 period, with ICT jobs growing about the national average and MCI jobs growing above national average. Creative commercial services showed the most rapid growth at 4.9% per annum between 1996 and 2009, whereas the hardware subsector showed an accelerating decrease in the number of jobs.

The number of business location shows a growth pattern similar to jobs, growing above the national average. MCI and ICT activities are usually performed in SMEs, measuring about 128,000 locations for slightly over half a million jobs. All subsectors in both the MCI and ICT sectors showed high growth numbers in the number of locations, notably arts and cultural heritage. In most recent years, growth in arts and cultural heritage, and media and entertainment has reached double-digit levels. Hardware has shown growth in business locations despite negative jobs development. Growth in business locations has accelerated in the Netherlands as a whole.

Turnover in the MCI sector in 2008 amounted to about 22 billion EUR in 2008. In the ICT sector, turnover amounted to 55 billion EU. The ICT sector, despite its smaller size, has been growing slightly faster than the ICT sector. Notably the hardware sector has shown decreasing turnover figures since 1996. Between 2006 and 2008, turnover in this subsector decreased even by 7.7% per annum. The ICT services subsector showed negative growth too. Turnover growth has been decreasing both for the MCI and ICT sectors, and for the Netherlands as a whole, reflecting the economic downturn of recent years.

Notably for the MCI sector (including content), a strong spatial concentration trend applies for numerous reasons, including the necessity of having customers, resources and inspiration in the vicinity. The Dutch capital Amsterdam harbours easily the most jobs in this sector. For ICT the difference with the other cities is less apparent. The other large cities Utrecht, The Hague, Rotterdam and Eindhoven all have significant numbers of MCI, content and ICT jobs too. Hilversum is home to most of the Dutch broadcasting organization. Groningen, Nijmegen, Amersfoort and 's-Hertogenbosch offer attractive urban environments and – partly – proximity to larger urban centres.

4. Country-specific Overview of the Media and Content Industries

4.1. Introduction

In Chapter 3, the evolution and state-of-play in the Media and Content Industries for the EU27 as a whole was described and analysed. In this chapter we take a closer look at developments in the individual Member States. More in particular, this chapter aims to present:

1. The share and growth of the MCI sector in the six EU Member States with the largest value added share in 2007.
2. The development of value added for these six EU Member States over time (1995-2007).
3. The degree of specialisation in each of the MCI sectors for all EU Member States.

The **value added** of a sector equals *the sum of all the values added by every firm in that particular sector, that is minus any intermediate products to avoid double counting*. It is a measure of the importance of a sector. The **specialisation index** is an indicator for the relative importance of a specific sector to the economy of a country. It is calculated as the *share of a MCI sector in the value added of a specific country divided by the share of this MCI sector in the value added of the total EU27 economy*. For example, when a sector has a share of 10% of the value added in a country and only a share of 5% in the value added for the EU27, this country has a specialisation index score of 200. The higher this index, the greater the importance of the MCI for a country's economy.

The data that were used for the graphs in this chapter can be found in Annex F.

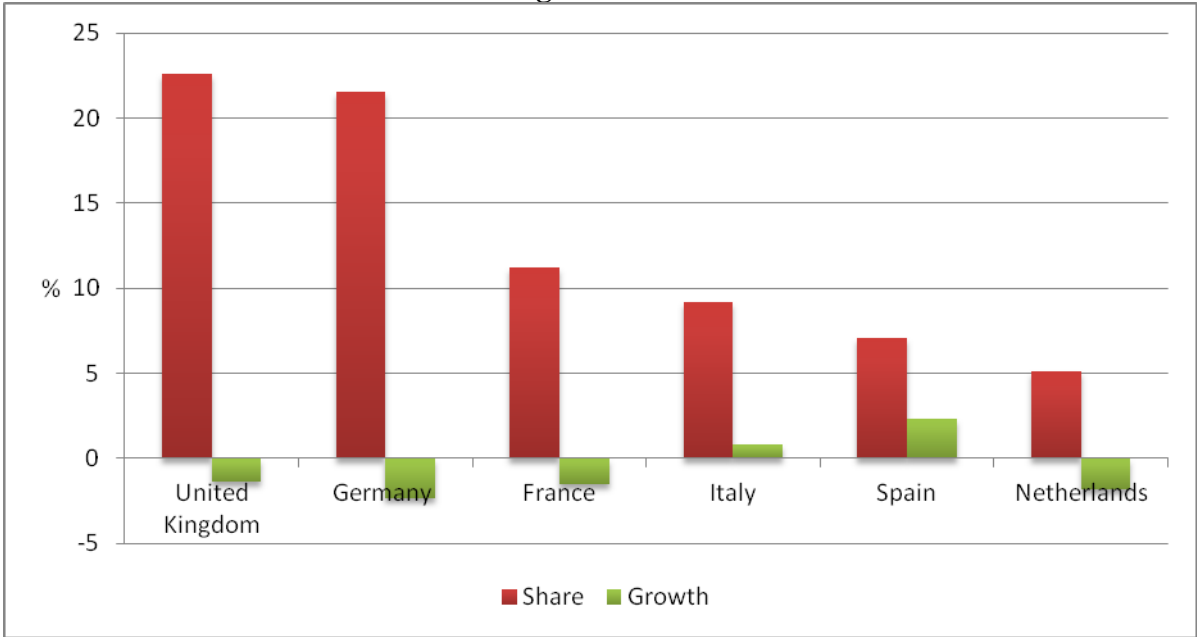
4.2. Printing, publishing and reproduction of recorded media

Figure 13 shows the six EU Member States which have the largest share in overall EU value added of the printing, publishing and reproduction of recorded media industry (ISIC category 22) in 2007. The figure shows that the United Kingdom and Germany have by far the largest share in the EU27, with a 23% and 22% share respectively. The market shares of the other four Member States are significantly smaller than the two leading countries. Number three is France with a share of almost 12%, followed by Italy, Spain and the Netherlands (see Figure 13).

The graph also shows the average annual growth of value added in the printing, publishing and reproduction of recorded media industry in these countries between 1995 and 2007. On average, the value added decreased between 1995 and 2007. Germany (2%) experienced the largest average annual decrease in added value between 1999 and 2007. This decline is mainly due to the decreasing shares of Germany on the markets for publishing of newspapers (paragraph 4.2.2), and publishing of journals and periodicals (paragraph 4.2.3). The largest decline in the UK was in the publishing of books (paragraph 4.2.1).

However, Italy and Spain experienced positive annual growth on average. This was mainly driven by growth in publishing of books, and publishing of journals and periodicals for Italy and for Spain growth came from publishing of newspapers and publishing of journals and periodicals.

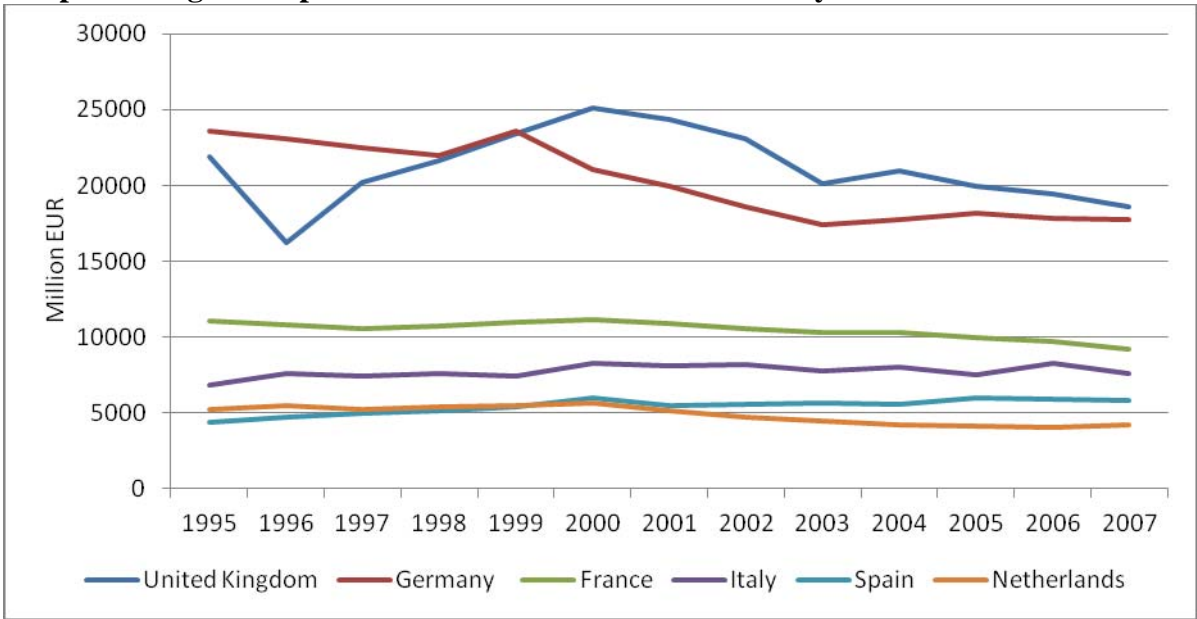
Figure 13: Share of six largest EU Member States in the total value added of the Printing, publishing and reproduction of recorded media industry in 2007 and average annual growth 1995-2007



Source: Eurostat.

Figure 14 shows that whereas in 1995 the UK did not have the largest value added share in printing, publishing and reproduction of recorded media, strong growth from 1996 onwards meant that by 1999 it overtook the number one position from Germany. Germany experienced a gradual decrease in value added until 2003, but its value added share has more or less stabilised since. Value added in the UK started to decline as from 2000.

Figure 14: Six largest EU Member States in the total value added of the Printing, publishing and reproduction of recorded media industry between 1995 and 2007



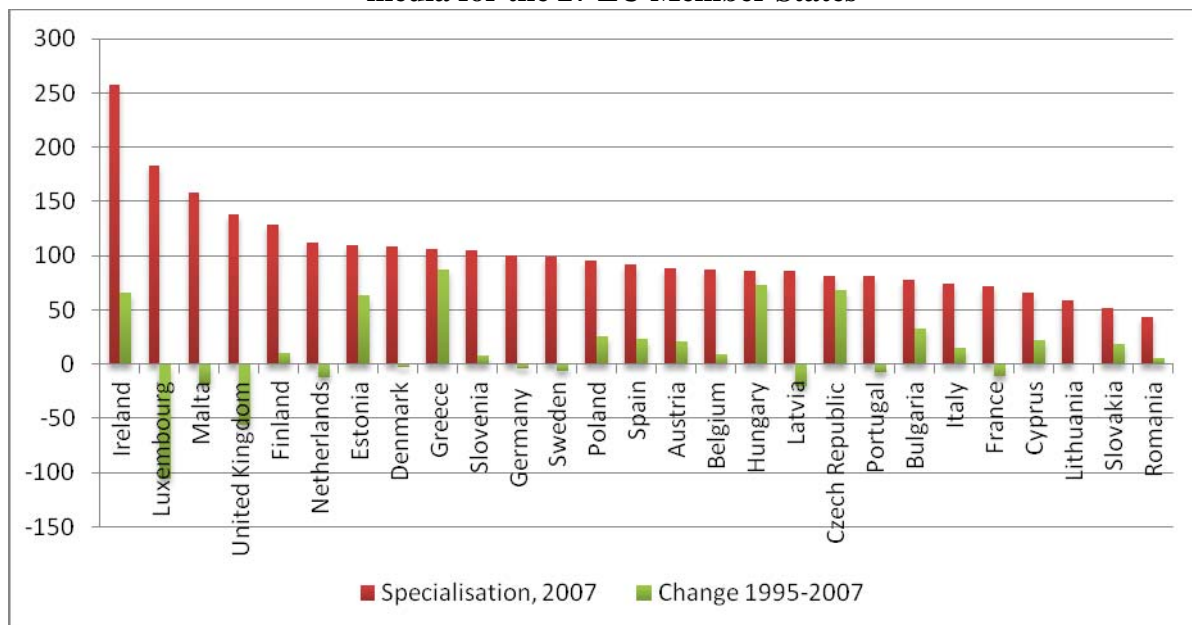
Source: Eurostat.

As explained, the specialisation index indicates the relative importance of a sector – here the printing, publishing and reproduction of recorded media industry - to the economy of a

country as a whole. A score of 100 means that the share of the sector in the country equals the share of this sector in the EU27. Figure 15 shows the specialisation index for the 27 Member States in the European Union. Overall, in Ireland, Luxembourg, Malta, the United Kingdom and Finland the printing, publishing and reproduction of recorded media industry is an important part of the national economy. At the other end of the spectrum in Romania, Slovakia, Lithuania, Cyprus and France this sector does not contribute much to the economy. The specialisation index in France and Italy is on the lower end of the spectrum, while both countries are part of the 6 largest markets in Europe (based on value added).

Countries in which this sector has markedly increased in importance during the period 1995-2007 include Greece, Hungary, Czech Republic, Estonia and Ireland. The relative importance of the sector decreased in the United Kingdom, Luxembourg and the Netherlands. This decline in these countries is first and foremost due to a larger increase of other sectors, rather than a decrease of MCI.

Figure 15: Specialisation index in Printing, publishing and reproduction of recorded media for the 27 EU Member States

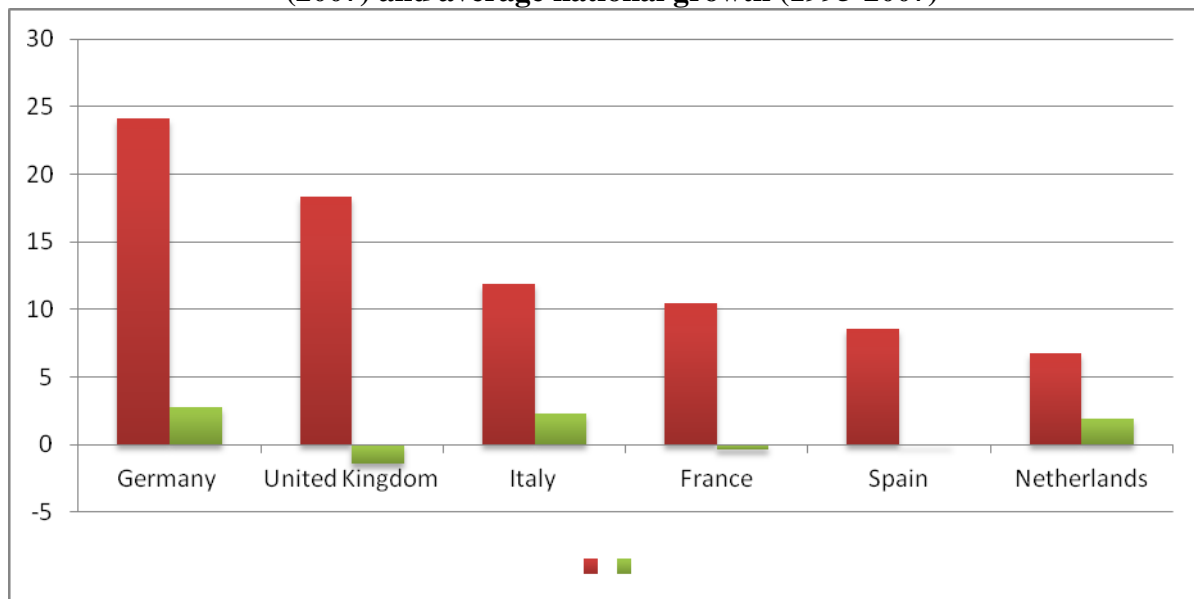


Source: Eurostat.

4.2.1. Publishing of books

Figure 16 shows the ranking of the six countries with the largest value added share in the EU publishing of books industry in 2007. With Germany in first position, with a share of almost one quarter of the total MCI value added in EU27, the United Kingdom and Italy followed in second and third ranking with a share of respectively 18% and 12%. During the period 1995-2007, the value added share decreased in the United Kingdom and France, whereas it increased in Germany, Italy and the Netherlands.

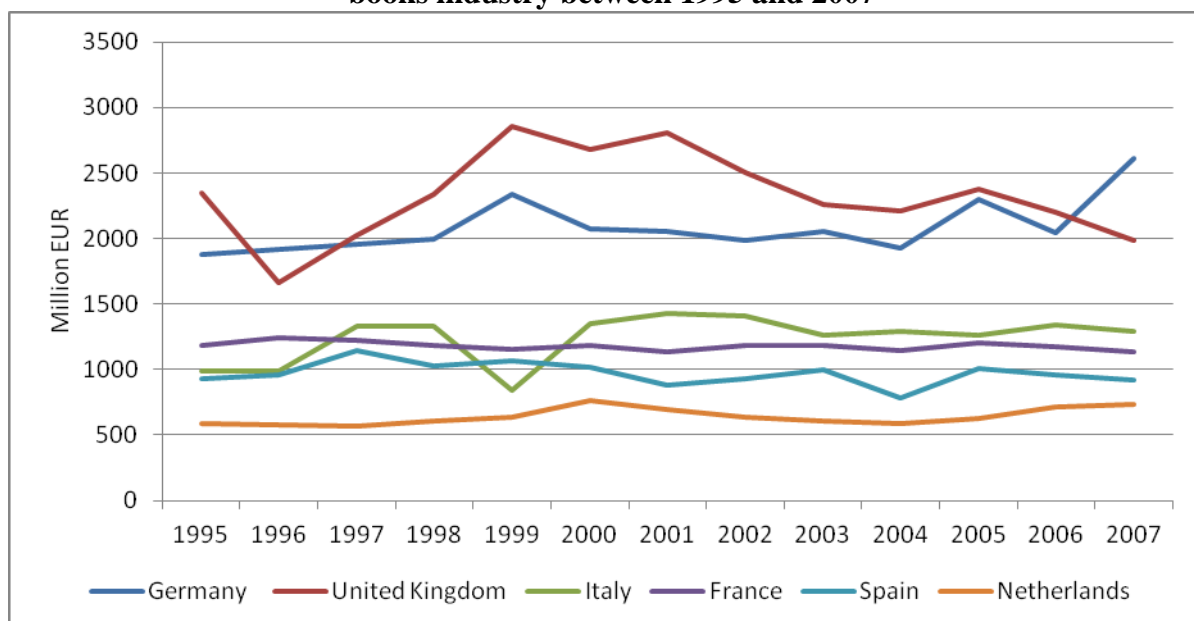
Figure 16: Value added share of the six largest EU Member States in book publishing (2007) and average national growth (1995-2007)



Source: Eurostat.

The growth in these countries is even more evident when the development of value-added over time of the six countries is compared with the largest share in the total value added (see Figure 17). As from 2006 Germany has taken over the position of largest European publisher of books from the United Kingdom. Remarkably, all countries experienced a small drop in market share in 2004, which is most likely caused by the joining of a large number of new Member States. Of those particularly Poland had a considerable book-publishing sector in 2007 (see Annex F, Table 75).

Figure 17: Six largest EU Member States in the total value added of the publishing of books industry between 1995 and 2007



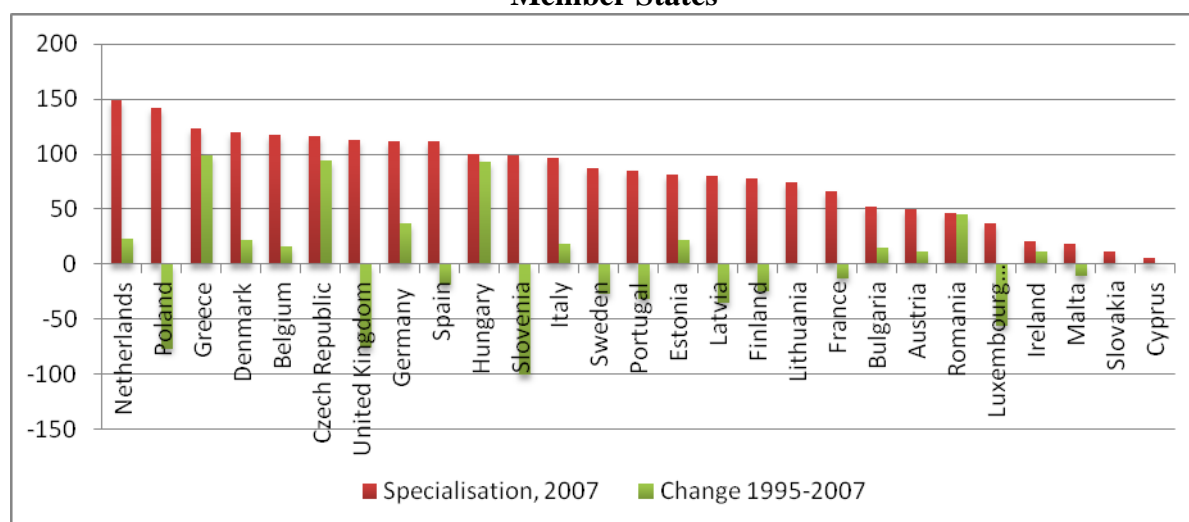
Source: Eurostat.

Figure 18 ranks all EU27 Member States by their score on the specialisation index. The publishing of books industry is relatively most important in the Netherlands, Poland, Greece,

and Denmark, with a share significantly larger than the overall EU27 share (EU27 Share = 100). In contrast, in Cyprus, Slovakia, Malta, and Ireland the industry is relatively less important.

The figure also shows the average growth rates in the specialisation index during the period 1995-2007. The publishing of books has become more important over the years in Greece, Czech Republic, Hungary and Romania, and less important in Poland, United Kingdom, Slovenia and Luxembourg.

Figure 18: Specialisation index of the Publishing of books industry for the 27 EU Member States



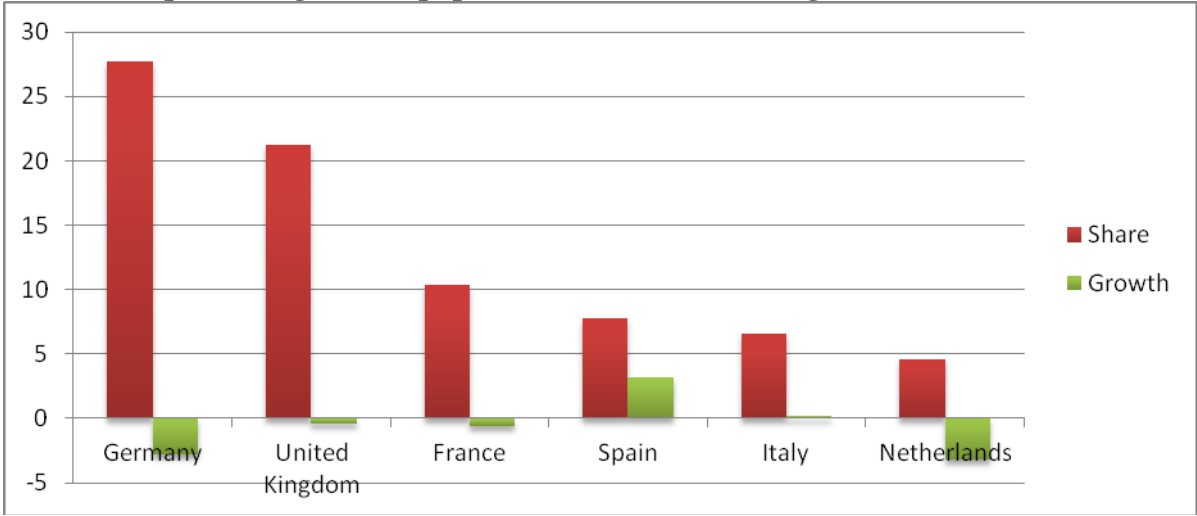
Source: Eurostat.

4.2.2. Publishing of newspapers

The six countries with the largest share in the European publishing of newspapers industry (shown in Figure 19) are similar to those in books publishing (paragraph 4.2.1). Germany is the largest publisher of newspapers with a share of nearly 28% in 2007, followed by the United Kingdom (21%) and France (10%). Other countries with a high share in the European publishing of newspapers industry are Spain, Italy and the Netherlands. Again there is a considerable gap between the top 2 markets and the other Member States.

The share of Germany and the Netherlands in publishing of newspapers shows a considerable decline over the 1995-2007 period, respectively publishing 2.8% and 3.2% annually. In Spain the share grew by an average of 3.2% annually, indicating the sector is gaining in importance (see also the growth in the specialisation index in Figure 21).

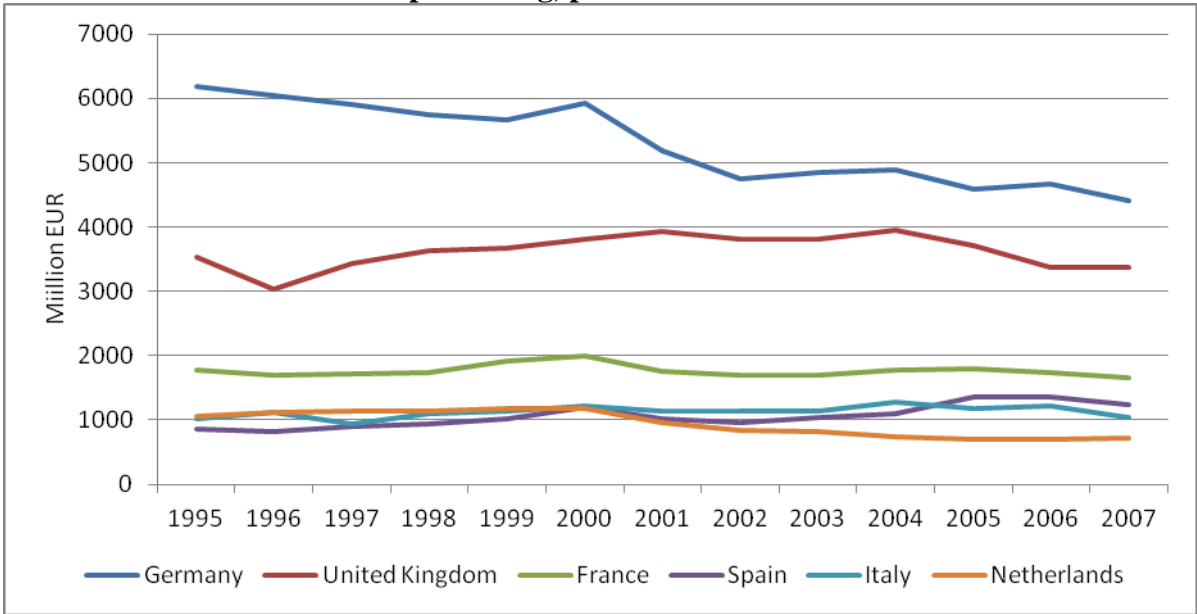
Figure 19: Share of six largest EU Member States in the total value added of the publishing of newspapers in 2007 and national growth 1995-2007



Source: Eurostat.

Figure 20 shows how the total valued added of the six EU Member States with the largest share in value added in the publishing of newspapers developed between 1995 and 2007. After 2000, the value added of the German and Dutch newspaper publishing industries decreased with respectively 1.5 billion and 467 million EUR to a total value added of 4.4 billion and 720 million EUR in 2007. Overall the value added in Germany can be seen to decline considerably since 1995, while the value added in the UK has shown some ups and downs, over 12 years the value added has remained relatively stable.

Figure 20: Six largest EU Member States in total EU value added in newspaper publishing, period 1995-2007

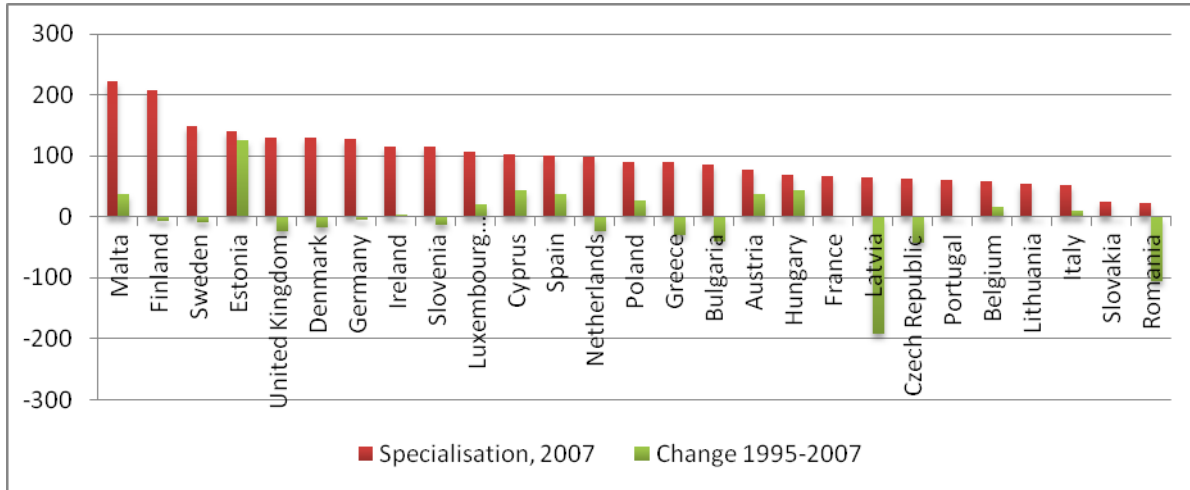


Source: Eurostat.

Although Germany is by far the largest publisher of newspapers, there are European countries for which publishing of newspapers is more important to their economy, as indicated by the specialisation index. Figure 21 ranks all European Member States by specialisation index in newspaper publishing. The small Member State Malta ranks first, followed by Finland, Sweden, Estonia and the United Kingdom, closely followed by Denmark and the largest

market, Germany. Publishing of newspapers is relatively unimportant in terms of value added in Romania, Slovakia, Italy, Lithuania and Belgium. EU Member States in which the publishing of newspapers industry is rising are Estonia, Spain, Hungary and Austria.

Figure 21: Specialisation index of the publishing of newspapers industry for each of the 27 EU Member States

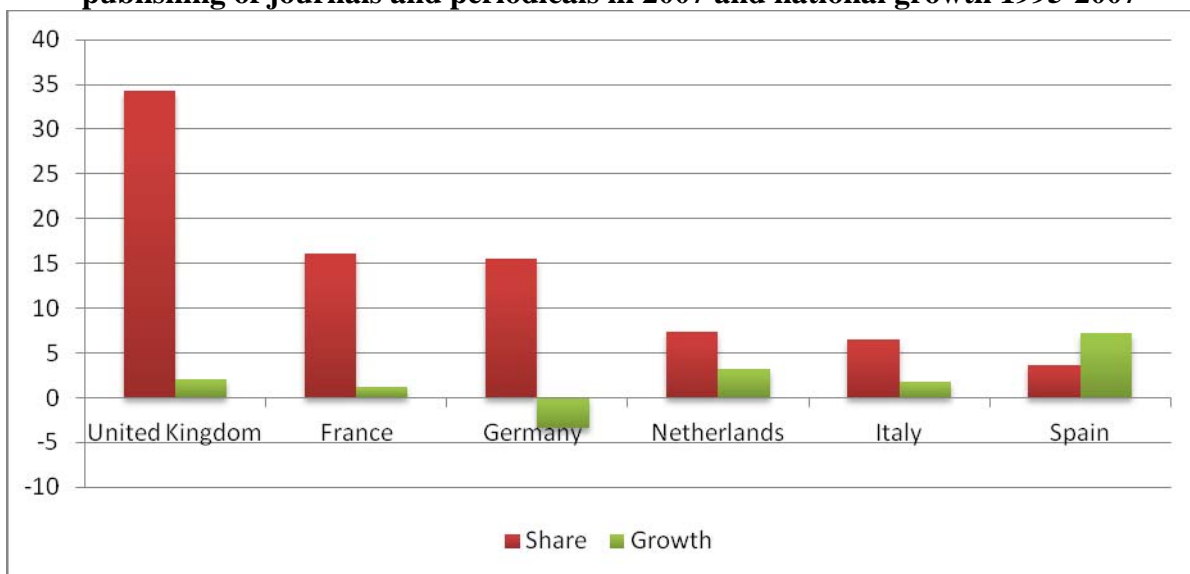


Source: Eurostat.

4.2.3. Publishing of journals and periodicals

More than one third of the total European value added in the publishing of journals and periodicals sector is generated by the United Kingdom (Figure 22). The French and the German publishing of journals and periodicals industries rank second and third, with both about a 15% share in total value added of the EU27. In all six countries, except for Germany, value added in the publishing of journals and periodicals sector has grown between 1995 and 2007. Especially in Spain (7%) and the Netherlands (3%) the share of value added in this sector increased considerably. The average value added generated by the German publishers of journals and periodicals decreased with 3%.

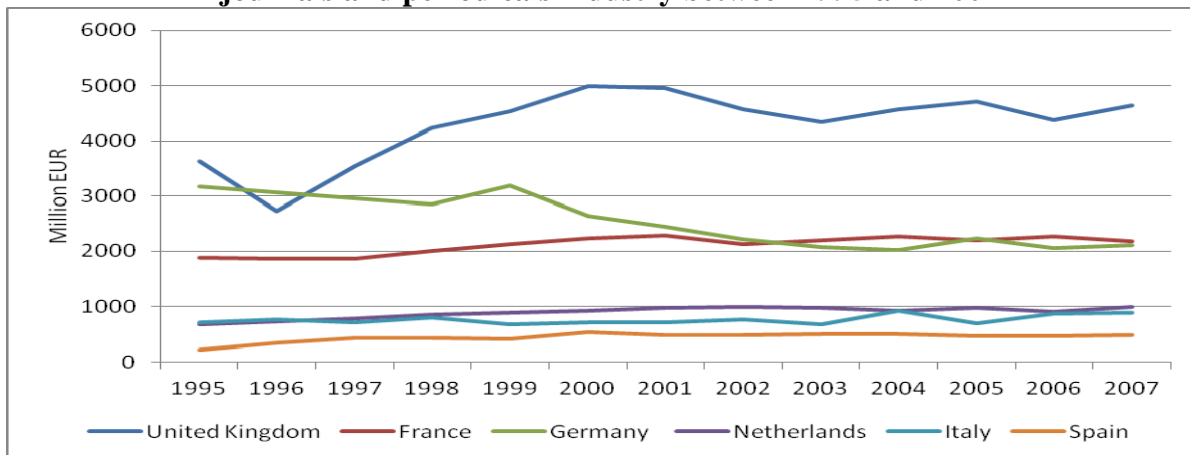
Figure 22: Share of six largest EU Member States in the total value added of the publishing of journals and periodicals in 2007 and national growth 1995-2007



Source: Eurostat.

Figure 23 shows these growth rates over time. The United Kingdom and Germany were the EU countries with the largest share in publishing journals and periodicals. However, in contrast to Germany the market in the United Kingdom experienced a tremendous growth between 1996 and 2000. After its 2000 peak, value added in the UK's publishing of journals and periodicals industry slowly decreased, to grow again in 2006. The German industry eventually lost its position to France in 2003, which shows a more stable growth between 1995 and 2007.

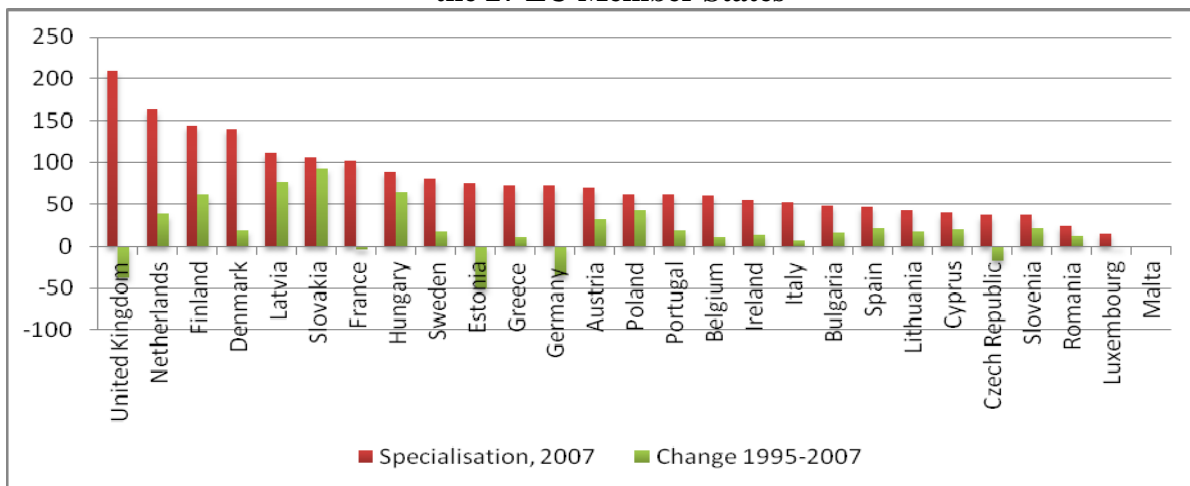
Figure 23: Six largest EU Member States in the total value added of the publishing of journals and periodicals industry between 1995 and 2007



Source: Eurostat.

The specialisation index in Figure 24 shows the relative importance of the publishing of journals and periodicals sector for the 27 European Member States. This industry is by far the most important to the United Kingdom, the Netherlands, Finland and Denmark. In the United Kingdom the publishing of journals and periodicals is more than twice as important to its economy as the European average (100). The publishing of journals and periodicals sector is least developed in Malta, Luxembourg and Romania. Especially the first two countries probably have economies that are too small and specialised to maintain their own industry and probably rely on import. Member States in which the publishing of journals and periodicals sector is upcoming are Slovakia, Latvia, Finland and Hungary. This industry became less important over the years in Estonia, the United Kingdom and Germany.

Figure 24: Specialisation index of the Publishing of journals and periodicals industry for the 27 EU Member States

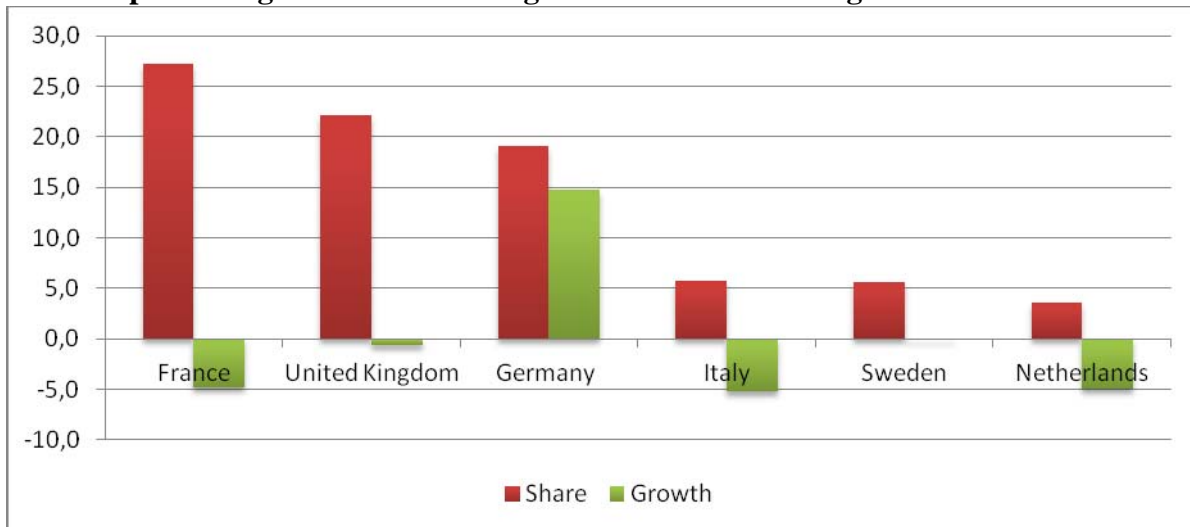


Source: Eurostat.

4.2.4. Publishing of sound recordings

The publishing of sound recordings is, together with ‘other publishing’, one of the smallest sub-sectors in publishing as defined in the ISIC classification, it makes up approximately 0.4% of total MCI (see paragraph 3.5, Figure 8). The three largest European economies dominate the publishing of sound recordings industry, together accounting for two thirds of the European market (value added). France ranks first with a share of 27%, the United Kingdom is second (22%) and Germany third (almost 20%). Germany is the only country of the six that shows (considerable) annual growth in value added over the 1995 and 2007 period (Figure 25). Most of this growth was realised in the years 1999 and 2003.

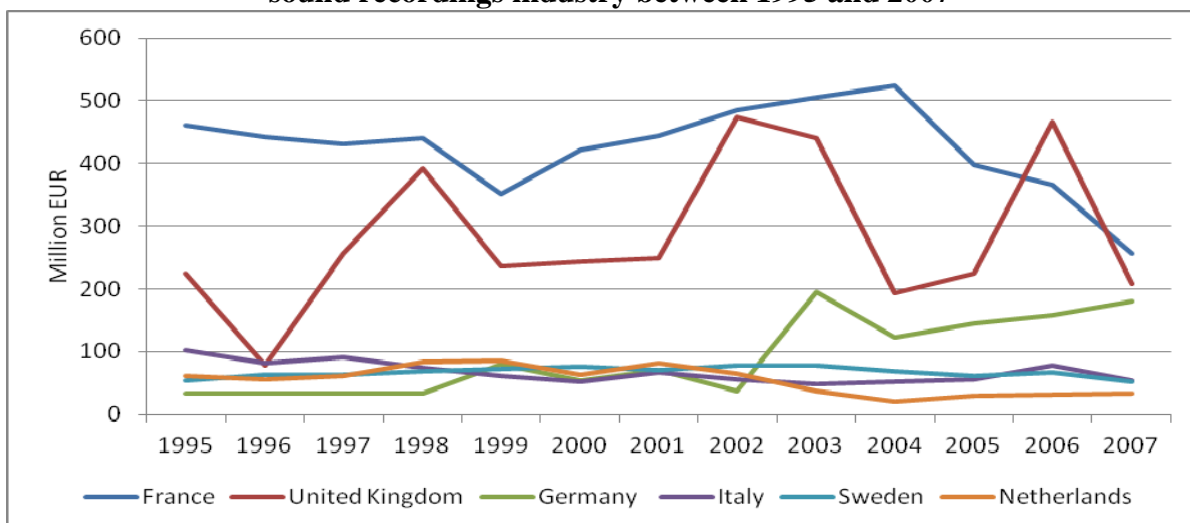
Figure 25: Share of six largest EU Member States in the total value added of the publishing of sound recordings in 2007 and national growth 1995-2007



Source: Eurostat.

The value added of the six countries with the largest share in the publishing of sound recordings fluctuated strongly between 1995 and 2007 (see Figure 26). Especially France and the United Kingdom show marked ups and downs in value added over the years. Value added developments in Italy, Sweden and the Netherlands appeared more stable between 1995 and 2007.

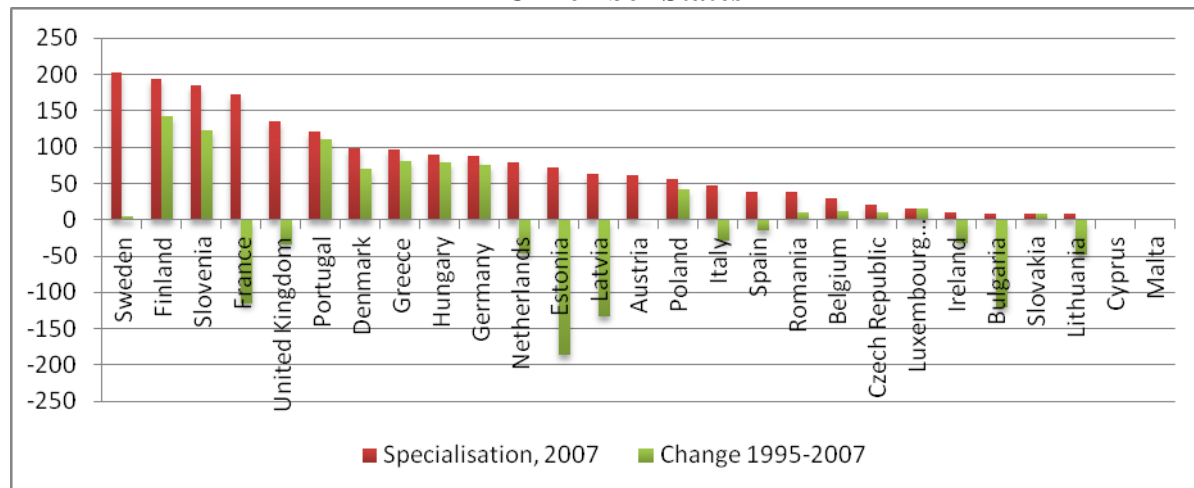
Figure 26: Six largest EU Member States in the total value added of the publishing of sound recordings industry between 1995 and 2007



Source: Eurostat.

The EU Member States most specialised in publishing sound recordings are Sweden, Finland, Slovenia, France and the UK. Countries in which the publishing of sound recordings sector is emerging strongly are Finland, Slovenia and Portugal. Publishing of sound recordings became less important in Estonia, Latvia, France and Bulgaria.

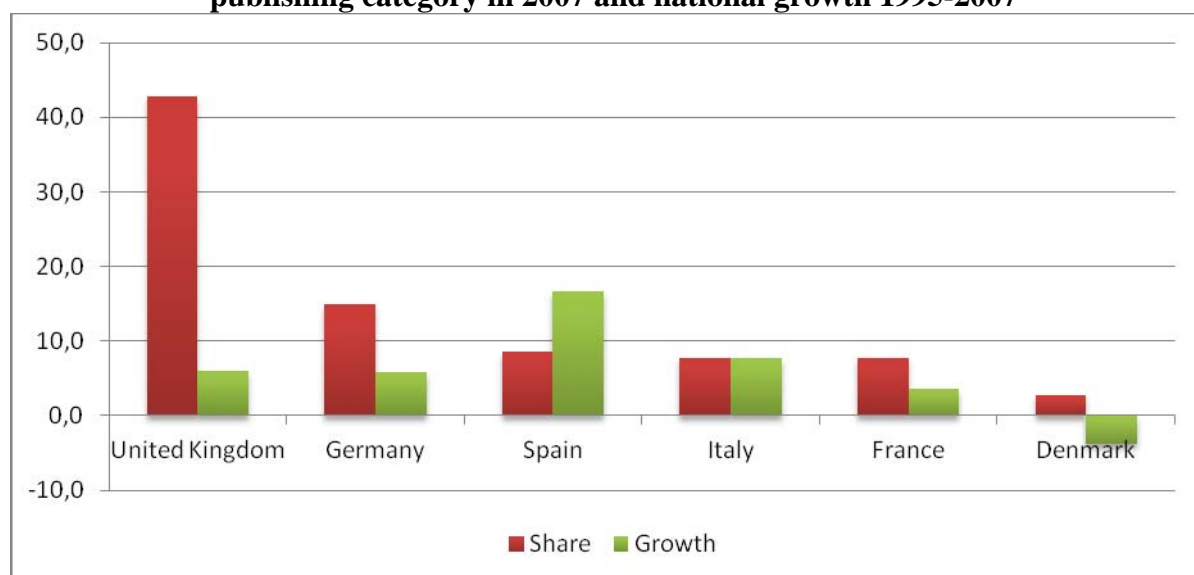
Figure 27: Specialisation index of the Publishing of sound recordings industry for the 27 EU Member States



4.2.5. Other Publishing

The category Other publishing covers the publishing of photos, engravings and postcards, greeting cards, timetables, forms, posters, reproduction of works of art and other printed matter (see further annex A) and makes up only 0.8% of MCI. As shown in Figure 28, the United Kingdom has by far the largest share (43%) in this small European industry, followed by Germany (15%) and Spain (9%). The sub-sector other publishing grew considerably between 1995 and 2007. Value added growth in Spain showed a remarkable annual growth of 17%; by contrast it decreased in Denmark.

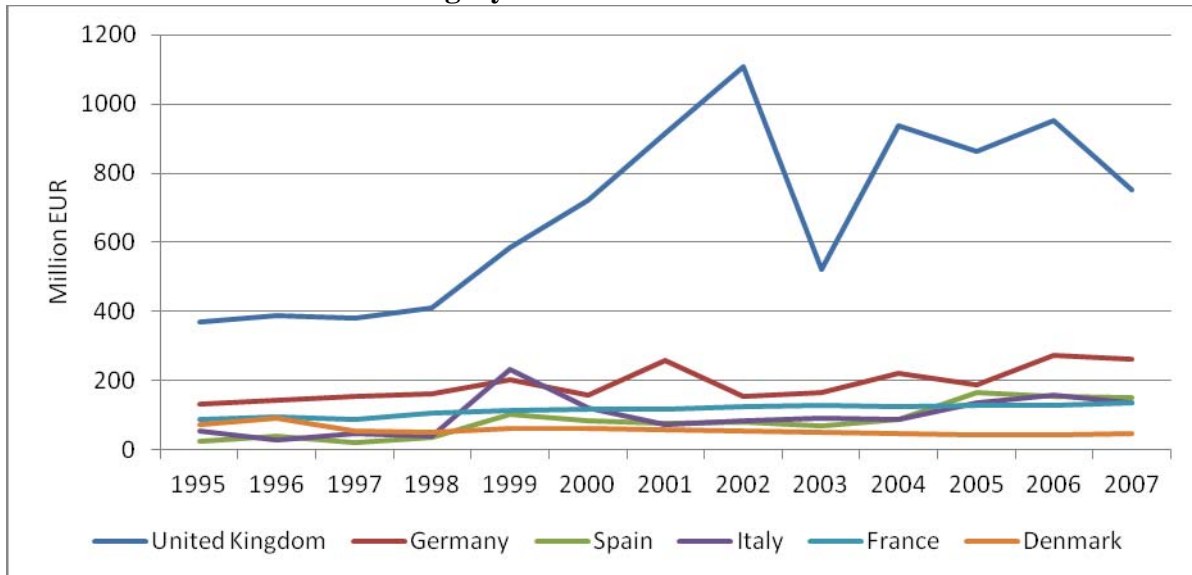
Figure 28: Share of six largest EU Member States in the total value added of other publishing category in 2007 and national growth 1995-2007



Source: Eurostat.

Figure 29 visualizes the dominance of the United Kingdom in Other publishing. Like the publishing of sound recordings, the value added of the six largest countries in this sector fluctuated over the years. Remarkable is an extreme drop in value added in the United Kingdom in 2003.

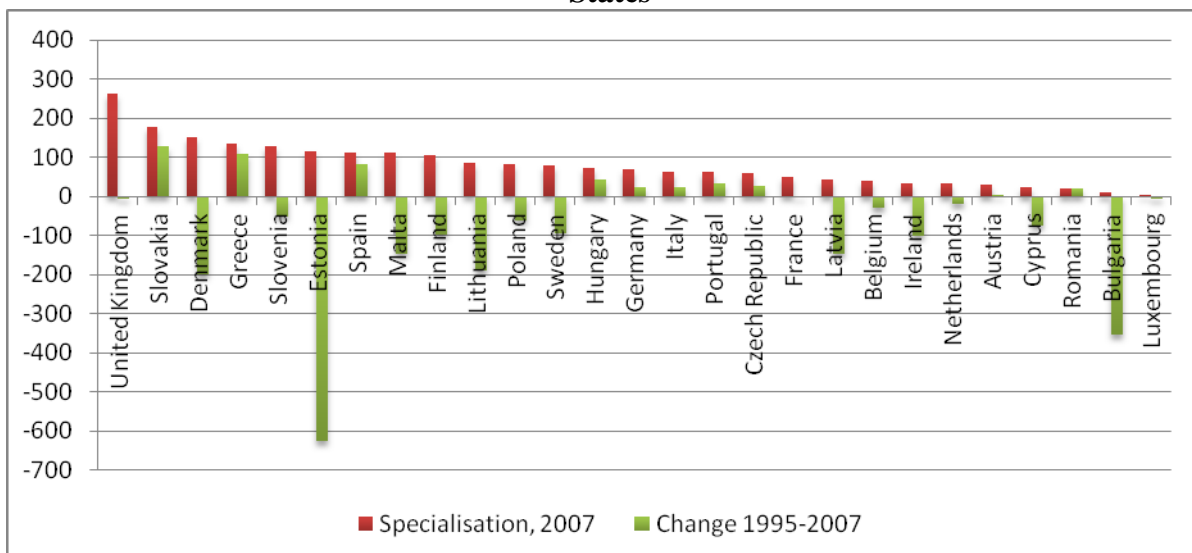
Figure 29: Six largest EU Member States in the total value added of other publishing category between 1995 and 2007



Source: Eurostat.

The specialisation index (Figure 30) shows that the United Kingdom, Slovakia and Denmark are most specialised in the Other publishing sector. Countries showing strong growth in this industry are Slovakia, Greece and Spain. Strong declines were observed in Estonia, Bulgaria, Denmark and Lithuania.

Figure 30: Specialisation index of the other publishing category for the 27 EU Member States



Source: Eurostat.

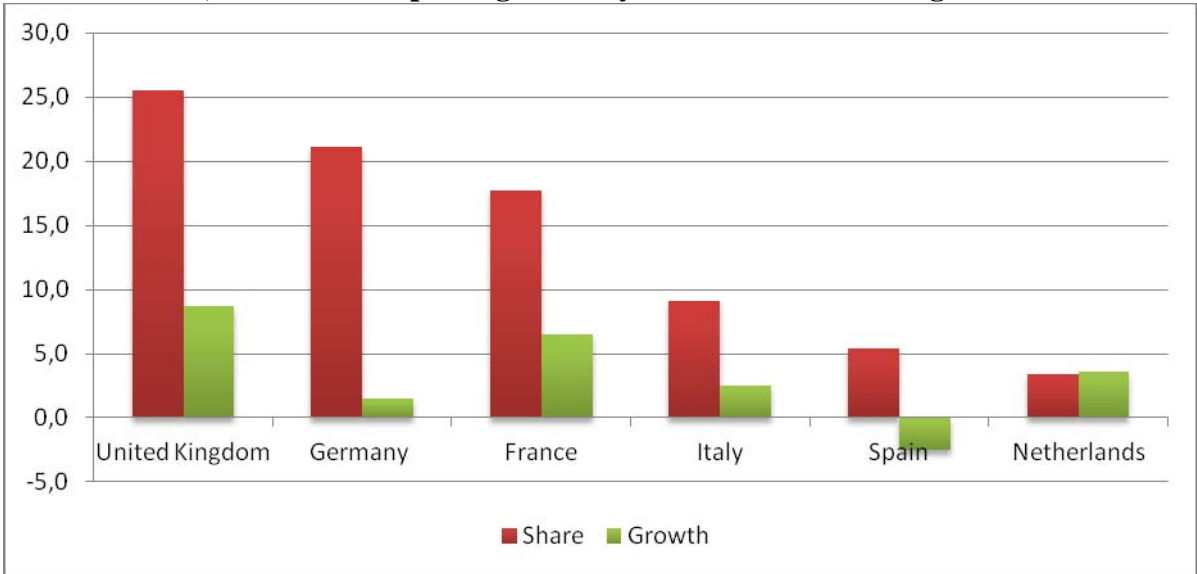
It should be noted that due to the relatively small market size of the sub-sectors Other publishing and Publishing of sound recordings, figures show less stable patterns over time than the larger publishing of books, newspapers and journals and periodicals sub-sectors.

4.3. Recreational, cultural and sporting activities

About one-fifth of Recreational, cultural and sporting activities (statistical category 92, ISIC rev3) relates to the sub-sector Motion picture and broadcasting industries, as estimated on the basis of 2008 ISIC rev4 data (see also Annex C). Unfortunately, there are no further data that allow us to split this category into the relevant MCI sub-sectors and exclude the other for the purpose of our goal irrelevant sub-categories sports, community work, live performances, gambling etc. In this section data therefore refer to the larger overall category Recreational, cultural and sporting industry.

Figure 31 shows the share and growth of the six EU Member States with the largest value added share in the recreational, cultural and sports sector. The United Kingdom shows the largest share with more than 25% of the total value added of the EU27, followed by Germany and France with 21% and 18%, respectively. The value added of United Kingdom and France grew considerably between 1995 and 2007, by 8% and 6.8%, respectively; more moderate growth was observed in the Netherlands and Italy. Little growth in value added appeared in Spain and Germany.

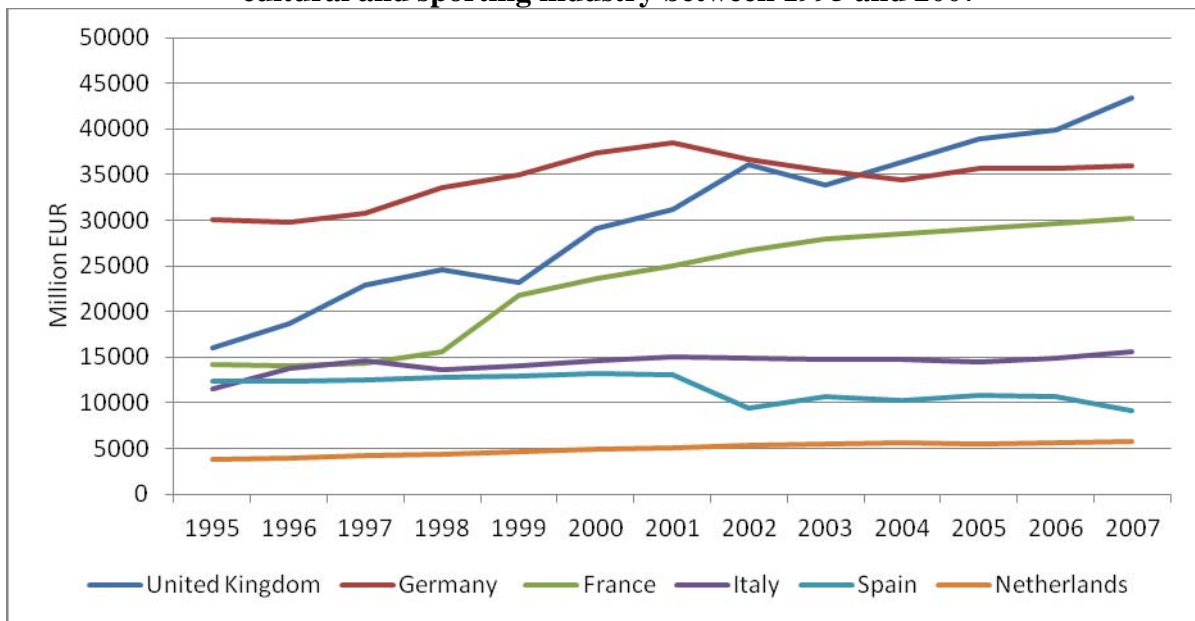
Figure 31: Share of six largest EU Member States in the total value added of the recreational, cultural and sporting industry in 2007 and national growth 1995-2007



Source: Eurostat.

The growth in value added is visualized in more detail in Figure 32, showing that the German recreational, cultural and sporting industry lost its leading position to the United Kingdom. The British recreational, cultural and sporting industry had a value added of more than 40 billion EUR in 2007. Both the UK and France showed strong value added growth.

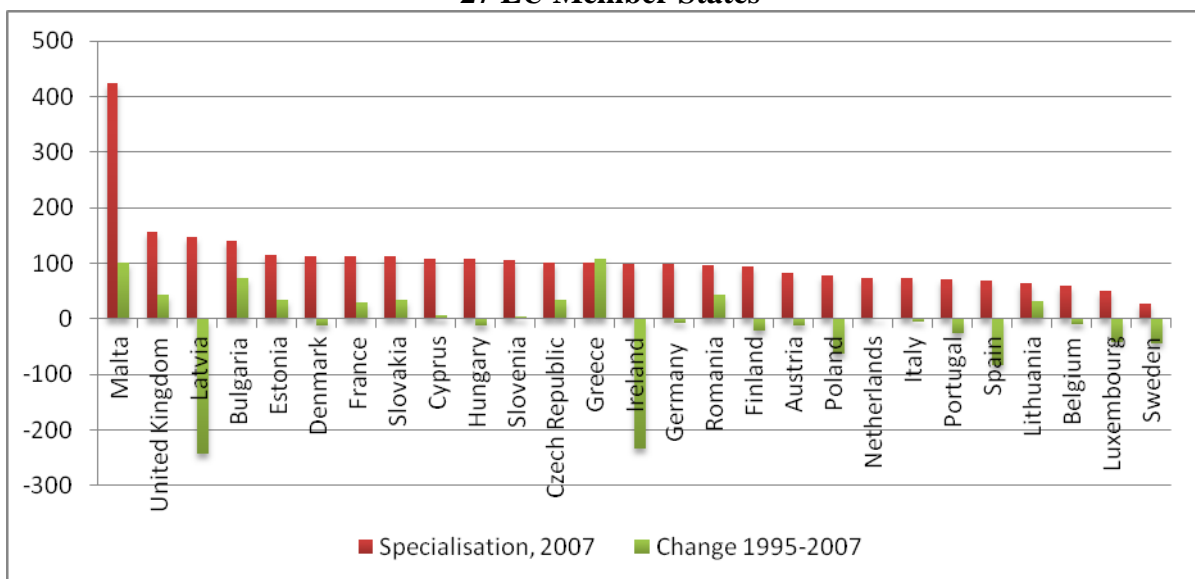
Figure 32: Six largest EU Member States in the total value added of the recreational, cultural and sporting industry between 1995 and 2007



Source: Eurostat.

The specialisation index indicating how important the recreational, cultural and sporting industry is for a specific country shows that Malta is by far most specialized in this industry (Figure 33). This appears mostly due to its favourable legal framework, which makes Malta one of the largest (online) gambling industries in Europe, highly impacting on its specialization score. Other countries with a high specialization score are the United Kingdom, Latvia, Bulgaria and Estonia. This industry is relatively minor in Sweden, Luxembourg, Belgium, Lithuania and Spain. Strong emerging countries are Greece, Malta and Bulgaria, while Latvia and Ireland experienced a remarkable drop.

Figure 33: Specialisation index of the recreational, cultural and sporting industry for the 27 EU Member States



Source: Eurostat.

5. Unofficial Statistics

5.1. Introduction

In order to complement the data from official statistics, this chapter presents some ‘unofficial’ statistics concerning developments in the MCI. With the help of this data, we intend to provide insight into the transformations taking place in the MCI that are not immediately apparent in the official statistics. The main topics for which statistical evidence has been collected are the transformations resulting from the impact of ICT, or more specifically the impact of the internet and digitalisation on the production and distribution of media and content. This concerns especially the shift from *offline (physical) to online digital distribution* of content, and the impact of piracy, P2P networks and user generated content in particular sub-sectors. Some of these data are also included in the subsector case studies that are part of this study.

5.2. Availability of unofficial statistics

From investigating data found by screening major sources from industry associations, consultancies and research institutes specialised in media and content industries, an important conclusion is that it is impossible to directly compare or complement official statistics with unofficial statistics (see Table 20), for a number of reasons:

- There are no reports containing data on all MCI (sub)sectors as defined by the OECD and Eurostat and followed in Chapters 1 to 4 of this report. Most market reports focus on particular sub-sectors only.
- Sectoral definitions and categorizations vary, and differ from the one followed by the OECD (ISIC) and Eurostat (NACE) and in this report;
- There are single country reports and some reports cover more than one country, but their geographical scope varies and there are very few sources that provide consistent and comparable country level data over longer periods of time.
- Statistics are usually confined to recent years, and sometimes include forecasts. There are hardly any publications that have appeared consistently and regularly over an extended period of time, covering the same (sub)sectors in the same countries;
- Different indicators are used for analysing (sub)sectors. Most consultancy reports contain data on market size in terms of total revenues, consumer spending, income from advertising, subscription or licence fees, or data on consumers’ use of networks, services and technologies and sometimes also the number of services (Video-on-demand) or TV channels available in particular national markets. Data on the main indicators collected by Eurostat, such as value added, number of firms, number of employees and imports and exports are mostly lacking in these publications.

Table 20 provides a selection of data sources of the main industry associations, research institutes and consultancies that collect data on media and content or media and content-related industries. We consulted these data sources in order to check the availability of quantitative data and statistics on recent developments in (parts of) the MCI sector and in the geographical markets covered by this project (EU27, US, Japan, China, India).

Table 20: Selection of the main unofficial sources

Source	Categorization	Geographical and historical scope	Main indicators	Remarks
European Audiovisual Observatory, yearbooks	Television	EU27 and Albania, Switzerland, Croatia, Iceland, FYROM, Norway, Russia and Turkey, yearbook 2009 contains data from 2003-2008	Cable and satellite TV subscriptions per household, number of TV operators, number of TV channels, supply of TV channels, operating revenues, TV audience and market share, total public income, advertising income	Useful for subsector study on TV / broadcasting
European Audiovisual Observatory, yearbooks	Film and home video	37 European countries, Japan, US, Argentina, Australia, Canada, China, Hong Kong, India and KR, yearbook 2009 contains data from 2003-2008	Number of feature films, number of co-productions with EU involvement, number of cinema screens, number of seats, inhabitants per screen, density of screens, distributor market shares, nr. of commercial digital screens, admissions, cinema attendance, ticket sales	Useful for subsector study on film
European Audiovisual Observatory, yearbooks	Specialised reports on world film trends, video-on-demand, catch-up TV services	Worldwide, with focus on EU27, yearly update	Admissions, gross box office, number of (digital) screens, number of feature films produced in EU, US, Japan. Number of VOD services in different countries, VOD revenues	Useful for subsector studies on film and TV broadcasting
Japan External Trade Organisation (JETRO)	Industrial reports on publishing Industry and film industry	2001-2005, Japan	Unit sales, best sellers, import/export, number of releases, number of screens, leading films	Useful for impression of Japanese publishing market
PwC Media and Entertainment Outlook	TV Filmed Entertainment (= DVD, Box-office)	Global, with figures on individual countries, but includes not all EU27 Member States. Uses West and East Europe as categories. Turkey is included in East Europe. Limited time series; 2008-2010, including forecasts to 2014	Income from advertising, subscriptions (including satellite and cable subscriptions), licence fee and consumer spendings	For publication of data written permission is required
Screen Digest	Music, movies, television, games, radio, publishing	EU-25, with comparisons to USA and Japan, 2001-2005	Value chain and market trends: revenues, penetration, market size and market shares	
Forrester				
KEA	Study of how the cultural and creative sector drives economic and social development, as well as innovation and cohesion. Relevant aspects of the report are film and video, television and radio, books and press and music	Focus on EU-25, some global numbers, data range mostly focused on 2000-2005, some 20 th century data.	Employment, revenues, import/export, piracy, market shares	Used in subsector studies, but data are limited to period up to 2005
International Federation of the Phonographic Industry (IFPI)	Overview of worldwide developments in the music industry	Global, yearly update	Off- and online sales, piracy, P2P, business models	
World Association of Newspapers and News Publishers (WAN)	Overview of worldwide developments in newspaper industry	Global, yearly update	Number of titles and circulation, advertising incomes, sales numbers, newspaper reach, online readership, salaries	

There are a number of limitations to the use of the non-official data:

- The data availability differs among subsectors; for the audiovisual sector the availability of data is good (e.g. via the Audiovisual Observatory) while for music and news less data is available;
- Data is often scattered among many different sources;
- Access to many different sources can be costly.

One way to overcome some of the limitations would be that industry associations – who can be expected to have access to better data – have a larger involvement in helping explain the dynamics in the sectors for example by providing access to more comprehensive data and analysis.

None of the sources provide the same data on macro economic indicators in a similar timeframe or for a similar geographical scope. The sources do, however, provide relevant data for sub-sectors, and contribute to an understanding of recent transformations within sub-sectors. They also provide qualitative analyses of trends and transformations, for instance by focusing on changes in business models, value chains, company strategies and media and content consumption.

5.3. Shift from offline to online

ICT and digitization have had effects throughout the value chain, from creation and production through aggregation and distribution to consumption. In this section we will present data on the impact of online and digital distribution on the markets for recorded music, filmed entertainment (film, TV, video) and publishing activities (news, books). The impact of digitization is apparent in the increasing shares of the total revenues that are generated by selling digital media and content products, compared to the analogue products. Another indicator of the increasing economic value of digital MCI products and services are advertising expenditures in different media, showing an increase in internet advertising.

Digitization has also made copying and sharing media and content products easier and has led to increasing distribution of media and content via digital channels as well as in P2P networks, part of which can be considered as copyright infringement. This development has in many sectors contributed to a decline in revenues from analogue products that so far have not been matched by an equal rise in digital revenues. We therefore also present some estimations of the impact of file sharing on the different sub sectors. Finally we will identify the main new market entrants that have had a significant impact on (sub)sectors.

In all MCI sectors spending on digital content has increased over the past decades. Table 21 shows the global revenues by industry²² and the digital shares of the revenues for 2006-2010 as presented in the PwC Global Entertainment and Media Outlook: 2011–2015. Digital spending increased from 1% for books and magazines and 11% for recorded music in 2006, to 3% (books and magazines) and 31% (recorded music) in 2010. These numbers show that although spending on digital content has become substantial, legacy off-line revenue streams are still significantly larger than digital revenues. At the same time, digital spending is increasing more than non-digital spending. The share of digital revenue for the music industry is especially large, increasing from 11% in 2006 to 31% in 2010. Film/video, newspapers,

²² Global statistics in this section refer to North America (Canada, USA), Western Europe (sixteen countries), Central and Eastern Europe (six countries), Middle East + Africa (three countries), Asia Pacific (fifteen countries), Latin America (six countries).

magazines and books lag behind with digital shares that remained below 6% of revenue between 2006 and 2010.

PwC also describes that consumers’ online media consumption and purchasing decisions differ widely at different times in different markets. The penetration of broadband internet and mobile internet in national markets is of strong influence on the decision to consume and purchase media on- or offline.

Table 21: Global revenue and share of digital in total revenue by industry, 2005-2009 (PwC and Wilkofsky Gruen Associates, 2011).

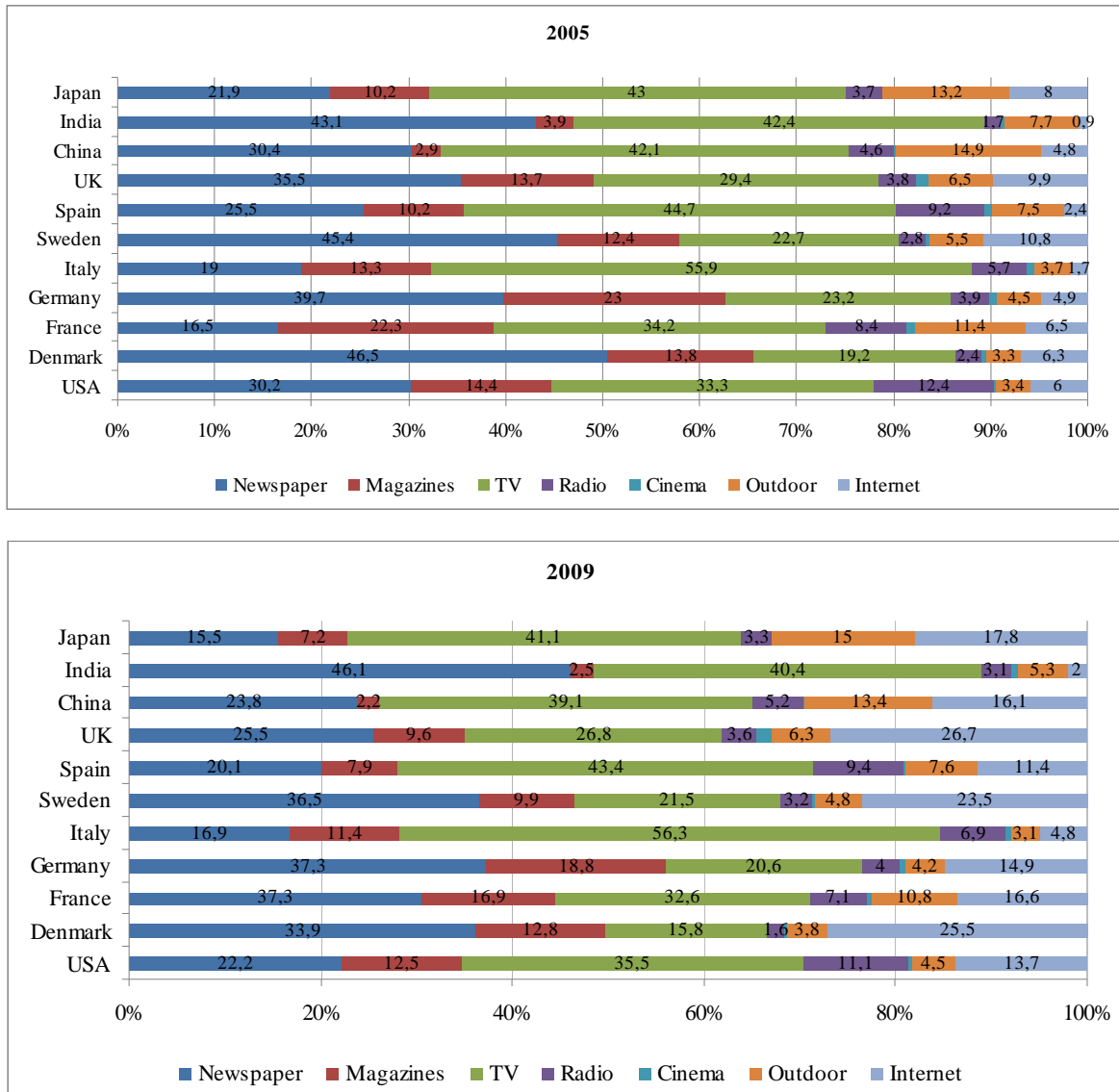
	Revenue 2006	Digital share 2006	Revenue 2007	Digital share 2007	Revenue 2008	Digital share 2008	Revenue 2009	Digital share 2009	Revenue 2010	Digital share 2010
Books (consumer and professional)	104061	1%	109569	1%	110072	1%	108499	2%	108691	3%
Magazines**	46677	0%	47153	0%	46394	0%	44052	0%	43385	0%
Filmed entertainment*	79407	2%	81210	3%	80304	4%	81584	5%	84194	6%
Newspapers**	69503	0%	71756	0%	73137	0%	72534	0%	72457	0%
Recorded music	33492	11%	30884	17%	27586	22%	25393	26%	23440	31%

Source: PwC (2011).

* Filmed entertainment is box office + home video, digital share is digital downloads of filmed entertainment + online rental subscriptions. Newspapers and magazines is digital and print advertising + circulation.

Another indicator for shifts in media markets are advertising revenues for digital outlets. Figure 34 compares the shares of advertising expenditures per medium type in 7 EU Member States, the US, China, India and Japan in 2005 and 2009 and shows a considerable increase in internet advertising expenditures. In 2005 in all these countries a relatively small proportion of advertising expenditure was related to internet advertising (2.4 – 10.8%) compared to the expenditure on advertising in traditional media (e.g. newspaper advertising expenditure ranged from 19 – 46.5%). In 2009 the share of expenditures on internet advertising had grown substantially (2 – 26.7%), although newspapers and television remained popular advertising media (15.5 – 46.1% and 15.8 – 43.4%). In Scandinavian countries and the UK, internet advertising expenditure increased to around 25%. In contrast in Italy the television became an even more popular advertising medium, with 56.3% of expenditure, compared to 4.8% of advertising expenditure spent on internet advertising (which is still more than double as compared to 2005).

Figure 34: Advertising expenditure shares (2005 and 2009)



Source: WAN (2010).

The increased opportunities for digital distribution of products has also led to great challenges for established companies in terms of new entrants (e.g. Apple iTunes and Amazon), but also in terms of (unwanted) distribution via technologies such as P2P networks. The industry regards piracy as a serious threat for their business. Table 22 shows estimates by the film industry in 2005 for the losses incurred due to piracy. For the music industry, IFPI (2010) states that the music industry experienced a decline in sales of 30% from 2004 to 2009, which it mainly attributes to file sharing. For the other sectors (publishing of newspapers, journals, magazines, books and (live) broadcasting) file sharing and related copyright infringements are not yet a major problem, although this might change soon, especially for books, when eBooks and take off. Copyright issues are also important for newspapers, but those result more from content aggregators linking to headlines (Google News and others) than from file sharing by consumers. For broadcasting copyright issues relate mainly to popular TV series and less to live broadcasting.

Table 22: estimated losses in the film sector due to piracy (2005)

Country	Losses (USD million)
France	1,547
UK	1,007
Spain	670
Germany	490
Italy	442
Poland	272
Hungary	199
Netherlands	129
Sweden	108

Source: KEA (2006).

5.3.1. New business models

New business models have arisen that take into account the dynamics introduced to the sector. In the IFPI digital music report and in the research of Amberg and Schröder (2007) and Haltunen et al (2010) a number of (new) business models are distinguished:

- *Pay-per-transaction model*: users pay a separate fee for every piece of content (for example a video or a music album) they download or listen/watch. An example of pay-per-download is Apple's iTunes Store. This model, pioneered by iTunes (which had over 100 million accounts in 2009 celebrated its 1 billionth download in February 2010 (Apple, 2010)), remains the largest revenue source in the online sector (IFPI, 2010). Other pay-per-listen/view services are mainly streaming based services that prevent users from storing content (Dubosson-Torbay, Pigneur, & Usunier, 2004).
- *Subscription model*: users pay a periodic flat fee and receive the right to download or listen to/watch content (un)limitedly for a certain period of time. This model is especially attractive for heavy users. The purchase barrier of this model is higher than for pay-per-transaction (Amberg & Schröder, 2007);
- *Advertising supported service model*: The service is paid for by advertising revenues. Sometimes users can choose between advertisement free premium service for which they have to pay or a free service which includes advertising. In another model, users have access to a certain amount of free content before they start paying. Examples are Spotify and Last.fm;
- *Electronic Sell Through*: users pay for each piece of (physical) content in online shops such as Amazon, BOL etc.
- *Redistribution model*: users pay a fee for each piece of content, plus the right to resell it to other users. This model is hardly used in practice (Haltunen, Makkonen, Frank, & Tyrväinen, 2010).
- For the analysis of new business models in MCI an additional one can be added: *free content*. Although this is not an official business model for companies, this model is the prevalent one when describing content sharing via P2P networks, although some of these networks do also sell advertising space.

These business models are slowly being adopted by traditional media companies, but they are to a large extent driven by new market entrants such as Apple's iTunes, Google's YouTube, Netflix and Hulu. In the following paragraphs, the effects of the shift from offline to online

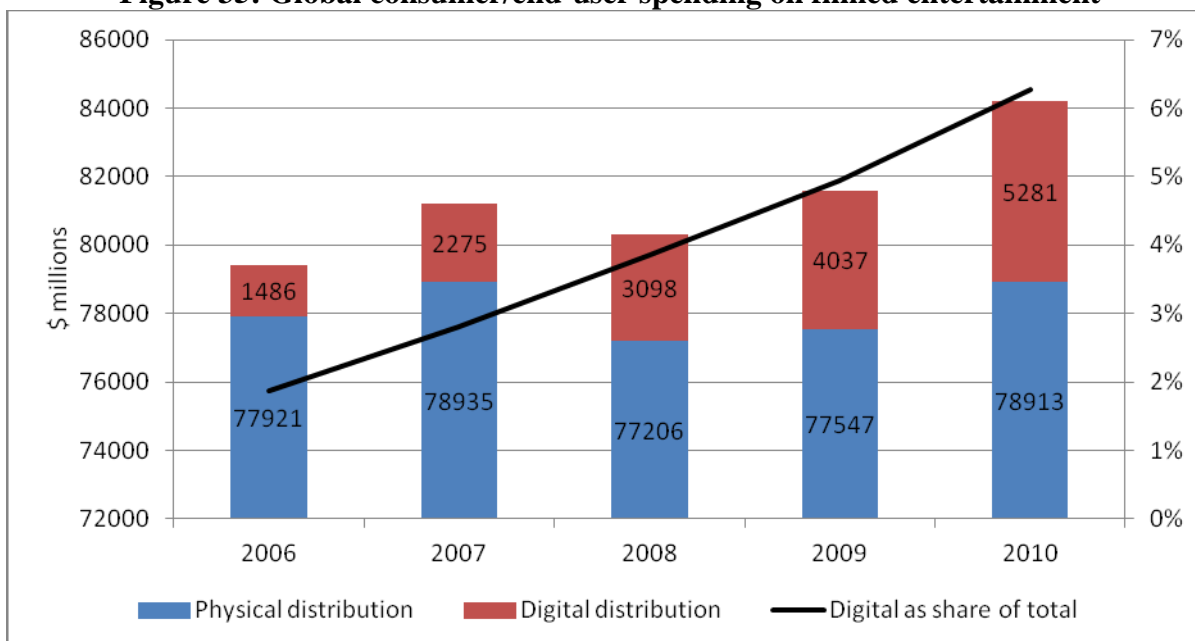
distribution is described in more detail for three sub-sectors, in which the abovementioned business models for the digital market are more or less successfully applied.

5.3.2. Audiovisual industry

According to PwC's definition in the Global entertainment and Media Outlook the filmed entertainment market consists of consumer spending at the box office, in-store spending on rentals of videos and the on- and offline purchase of home video products. It also includes online film rental subscription services and streaming services. We will use this definition in our description of the shift from offline to online on the audiovisual market.

Global consumer spending on filmed entertainment has slowly risen from 2006 to 2010, with a small decline in 2008 but recovery in 2009 (Figure 35). It is the only segment in the media and entertainment industry that showed growth in 2009, mainly through a growth in box office spending, a benefited largely attributed to the introduction of 3D movies. The recession, together with piracy caused the physical sell-through market to fall in 2008. The digital distribution (through online rental subscription and digital downloads) of filmed entertainment was rising, with a top in 2007, when spending increased 53% compared to 2006. Digital distribution and sale are growing fast, but as a share of total spending digital is still only 6% in 2010.

Figure 35: Global consumer/end-user spending on filmed entertainment



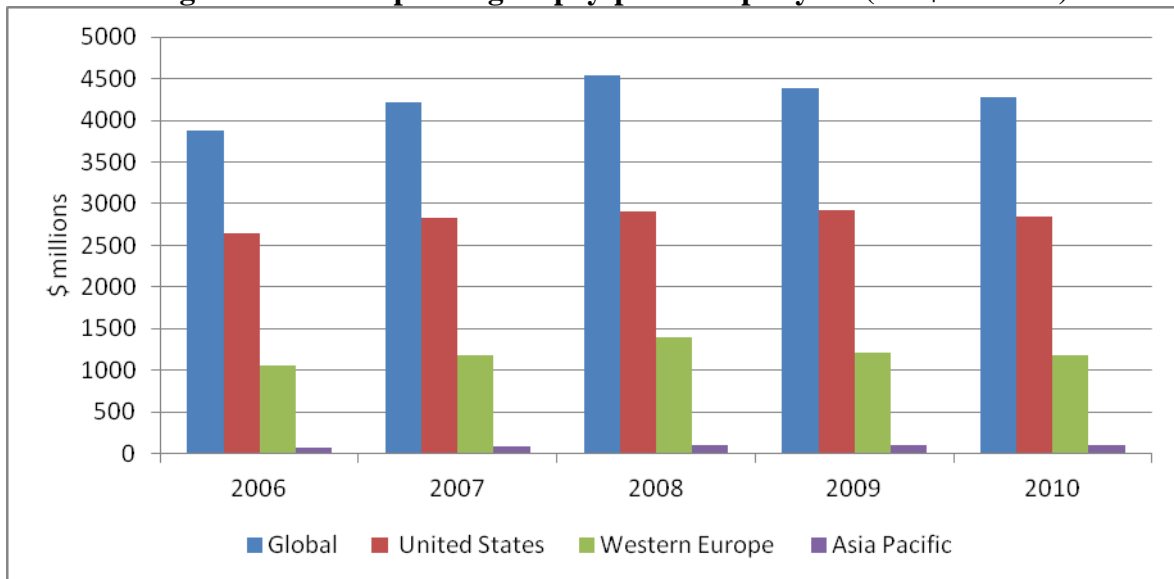
Source: PwC (2011).

5.3.3. Online distribution and revenues

Film and TV have witnessed a shift from analogue to digital and online consumption. Digital TV channels (many special interest or targeted channels), online video-on-demand services, video-on-demand (VOD) services offered on TV platforms, catch-up or delay TV services, online file sharing platforms such as YouTube and mobile TV services and apps for tablets, are some of the many new ways in which film and video are distributed. This shift to digital and online platforms and distribution channels has also caused a shift in video consumption and the revenues in the film, TV and video industry. According to PwC (2011) of online video services, paid use of movie rentals, movie downloads, and TV downloads has doubled

between 2008 and 2009 (Figure 36) and is expected to increase further (Parks Associates, 2008).

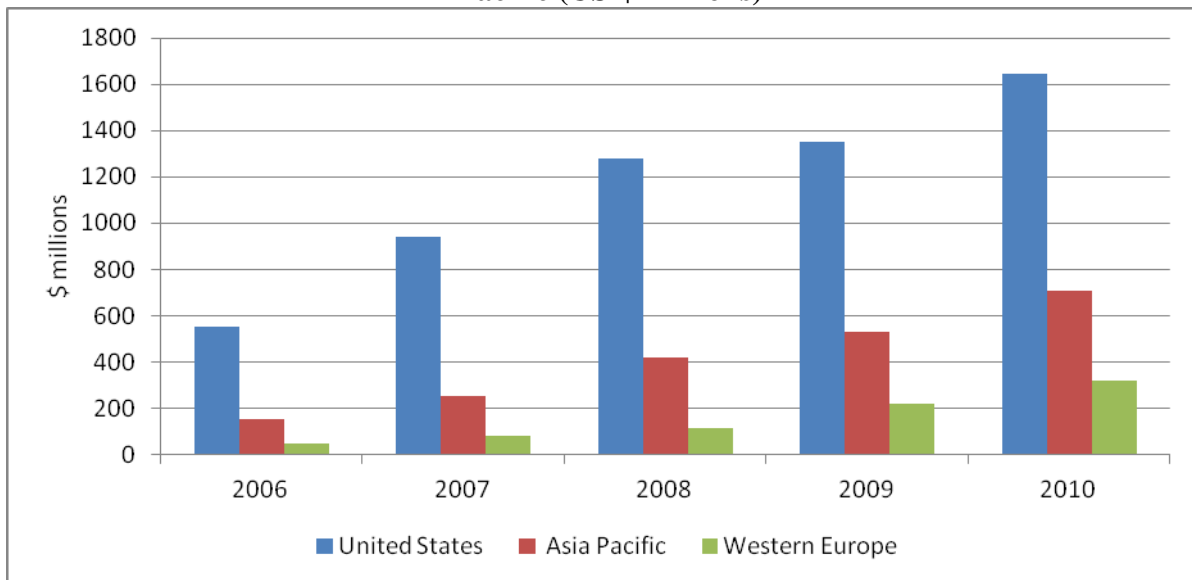
Figure 36: Total spending on pay-per-view per year (US-\$ millions)



Source: PwC (2011).

Figure 37 provides a comparison of spending on online television advertising in Western-Europe, the US, and Asia-Pacific. It is clear that the US is by far the largest market, approximately 2.6 times that of the total Western European market.

Figure 37: Spending on online television advertising in Western-Europe, US and Asia Pacific (US-\$ millions)

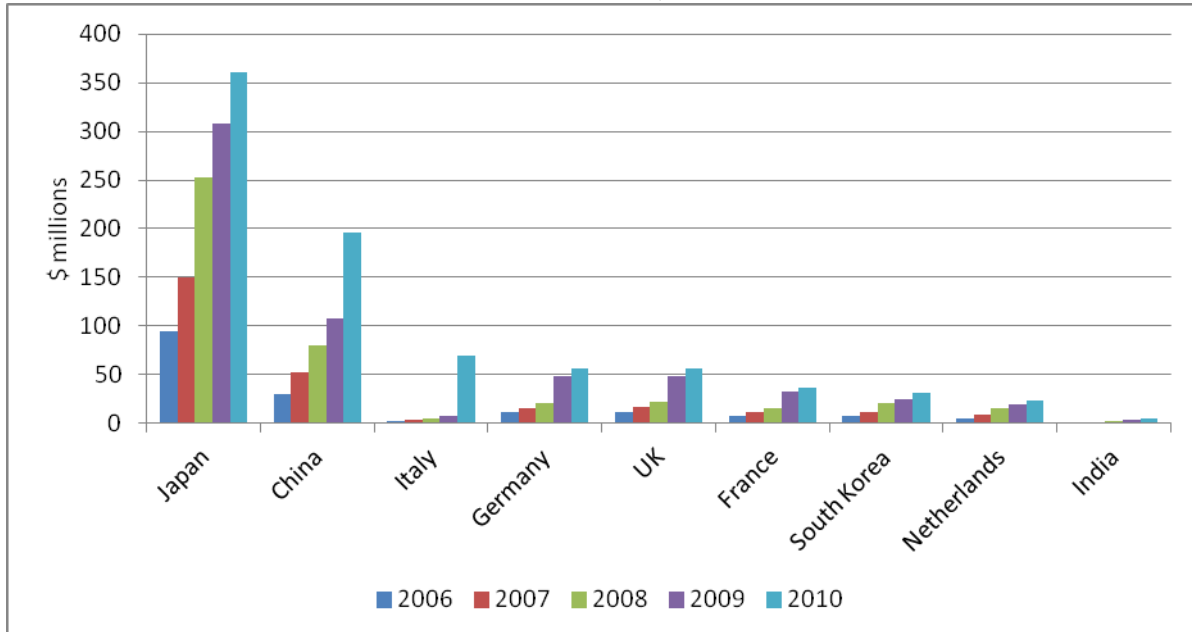


Source: PwC (2011).

Figure 38 shows the size of major markets in Europe and Asia. The US has not been included due to large differences in size with the other markets (and thereby readability of the graph). The spending on online television advertising in the US increased from 350 million US\$ in 2005 to 1,350 million US\$ in 2009.

The largest markets in Europe (see Chapter 3) are Italy, Germany, the UK, France and The Netherlands. For Asia, Japan stands out, increasing from 95 million US\$ in 2006 to 360 million US\$ spend on online television advertising in 2010.

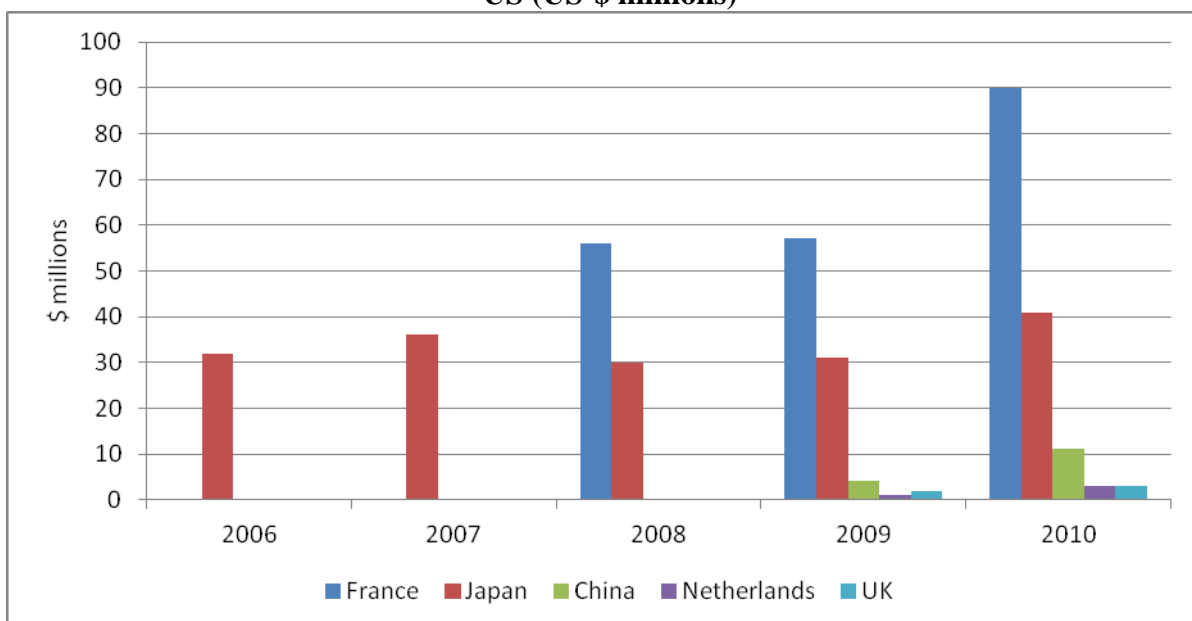
Figure 38: Spending on online television advertising, Major markets, excl. US (US-\$ millions)



Source: PwC (2011).

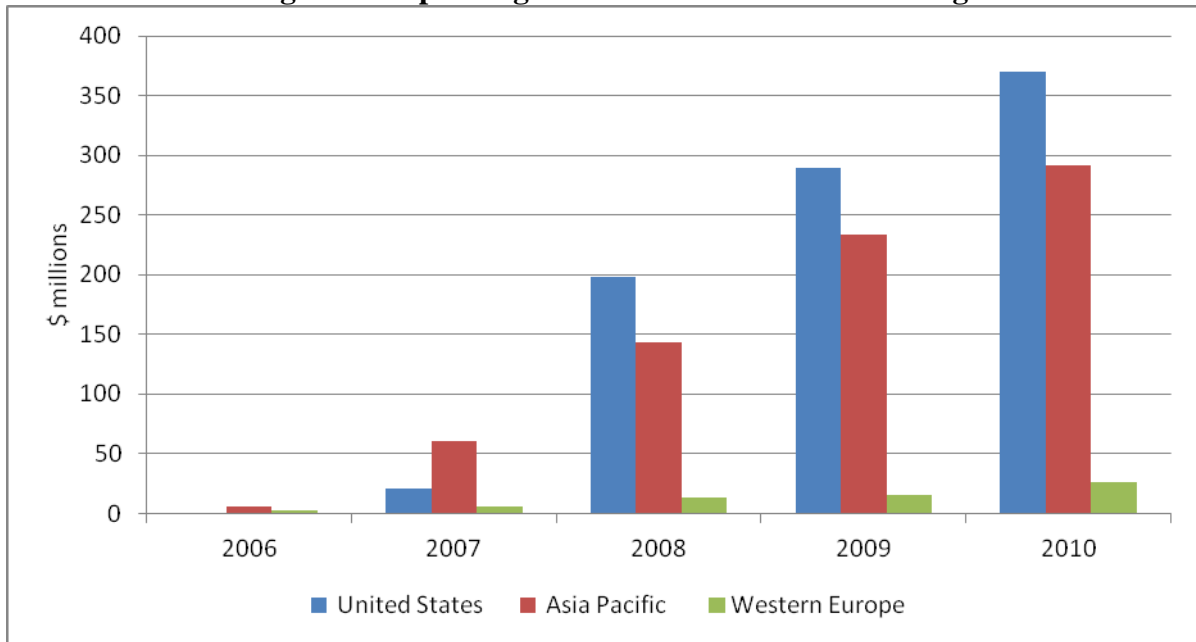
Figure 39 shows the spending on mobile TV subscriptions, as yet another new source of revenues from digital content, which started earlier in Japan but is now bigger in France. Overall these revenues are still minor compared to other online audiovisual revenues. The same is true for advertising on mobile TV, as is illustrated in Figure 40.

Figure 39: Consumer spending on mobile television subscriptions, Major markets, excl. US (US-\$ millions)



Source: PwC (2011).

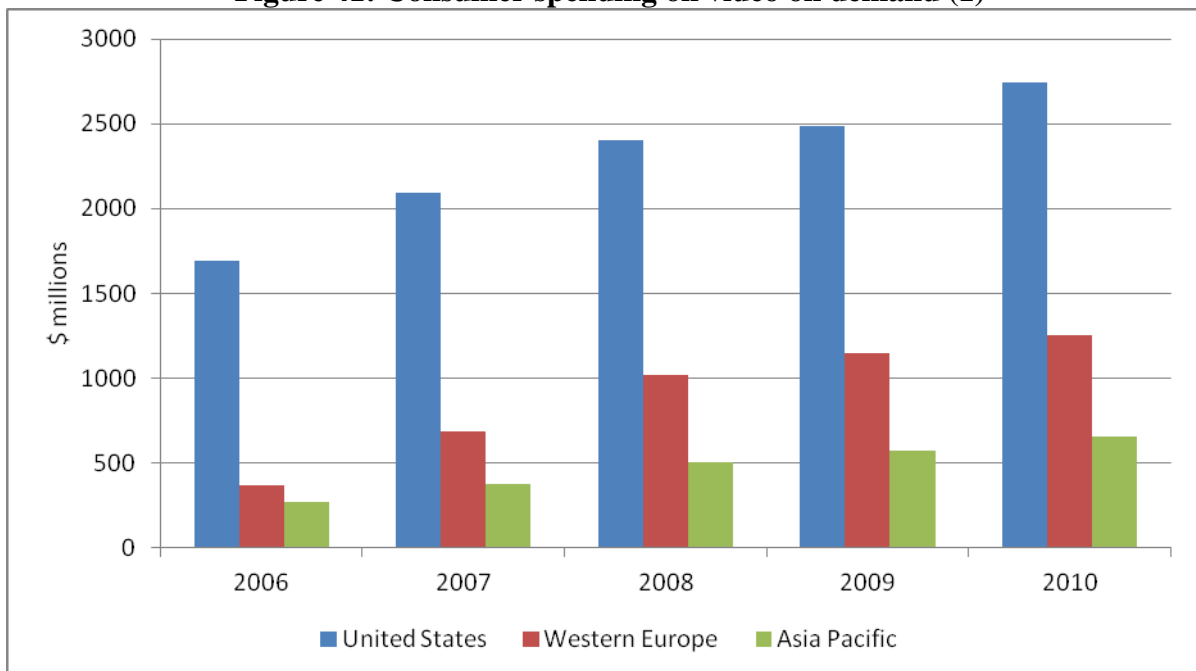
Figure 40: Spending on mobile television advertising



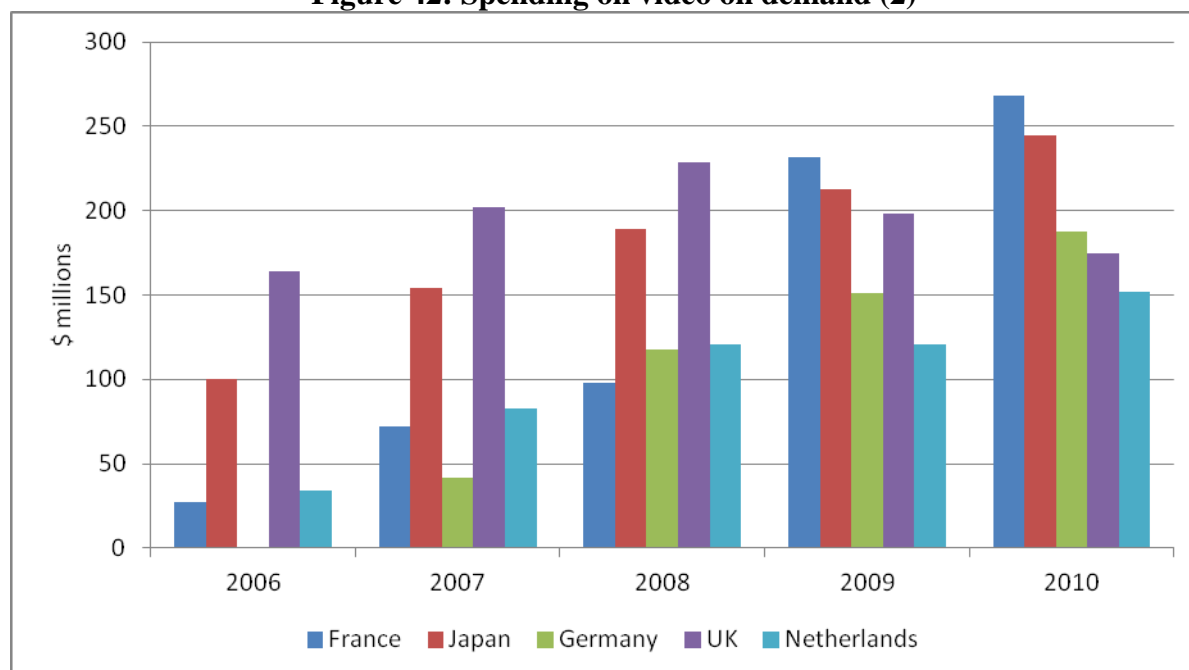
Source: PwC (2011).

When zooming in on the consumer spending on video on demand (VOD), 2006 to 2010 show remarkable increases in spending (Figure 41).

Figure 41: Consumer spending on video on demand (1)



Source: PwC (2011).

Figure 42: Spending on video on demand (2)

Source: PwC (2011).

Every year, the European Audiovisual Observatory presents the world film market trends (EAO, 2009b). In the 2009 report, VOD is discussed as an upcoming trend. VOD services were first launched in 2001 in Italy and the UK. For the European Union, the European Audiovisual Observatory estimates that there were almost 700 VOD services as of December 2008 (as can be seen in Table 23). The largest number of VOD services was found in the United Kingdom (145), followed by France (106) and Italy (93) (EAO, 2009b). The Observatory estimates that there were 278 VOD services that offer a catalogue of films as of November 2008, up from 142 in 2007.

Table 23: Number of VOD services (as accessible in the considered country) for the Top 10 countries with the most VOD services (December 2008)

	Internet	IPTV	Cable	Satellite	TNT	Total
DK	1					1
NO	11	7				18
SE	15	7				22
ES	20	3	2			25
BE	14	4	15			33
NL	34	4	6			44
DE	49	3		3		55
IT	16	77				93
FR	72	24	10			106
GB	76	34	6	4	25	145
Total	317	175	43	15	25	695

Source: European Audiovisual Observatory.

The EAO states that it is difficult to assess the development of the VOD market and its impact on the traditional video industry, because the providers hardly supply data and national cinema agencies hardly collect data on the topic. The report refers to Screen Digest,²³ which reports a market of 156 million US\$ in the USA and 38 million US\$ in Europe in 2008.²⁴ Additionally, the EAO presents attempts to quantify the VOD market in Spain, France, the United Kingdom and the United States.

Table 24 to Table 27 show the VOD revenues in three EU countries (France, Spain and the UK) and the US. For France and Spain these are first compared to the total revenues in the audiovisual sector, including advertising, subscriptions and subsidies, and secondly the revenues of physical DVDs are compared to the revenues of the digital product or service. For Spain, the figures for VOD and pay-per-view are added together and are said to have amounted to 243.8 million EUR in 2008, or 3.6% of the sector's revenues. The percentage share of VOD is rising, from 3.4% in 2007 and 2.8% in 2006. In France (Table 25), the revenues for VOD were 243.8 million EUR in 2008, which is 0.7% of total revenues for the sector. Similar to Spain (), the share of VOD is increasing. In 2007, VOD in France accounted for 0.4% of the revenues, in 2006 for 0.2%. When only physical (sale and rental) of DVDs and VOD are taken together, the share of VOD has risen from 0.8% in 2006 to 3.6% in 2008.

Table 24: Revenues of the audiovisual industry in Spain (2006-2008)

	Million EUR				Percentage share		
	2006	2007	2008	2008/07	2006	2007	2008
Commercial advertising	3,290.6	3,582.5	3,246.5	-9.4%	50.3%	52.8%	47.7%
Pay-TV subscriptions	1,323.9	1,393.9	1,439.1	3.2%	20.3%	20.5%	21.2%
Pay-per-view and VoD	184.9	227.7	243.8	7.1%	2.8%	3.4%	3.6%
Subsidies	1,190.9	1,017.7	1,277.5	25.5%	18.2%	15.0%	18.8%
Other	546.9	564.3	597.2	5.8%	8.4%	8.3%	8.8%
Total	6,537.2	6,786.1	6,804.1	0.3%	100.0%	100.0%	100.0%
Source: CMT							
	2006	2007	2008	2008/07	2006	2007	2008
Video (sales)	364.5	372.4	318.6	-14.4%	44.7%	46.6%	43.9%
Video (rentals)	266.5	199.8	162.8	-18.5%	32.7%	25.0%	22.4%
Pay-per-view and VoD	184.9	227.7	243.8	7.1%	22.7%	28.5%	33.6%
Total video, nVoD and VoD	815.9	799.9	725.2	-9.3%	100.0%	100.0%	100.0%

Source: European Audiovisual Observatory based on IVF and CMT data.

²³ www.screendigest.com

²⁴ Data of trends from EAO (2009) "Vidéo à la demande et télévision de rattrapage en Europe" will be added.

Table 25: Household expenditure on audiovisual products and services in France (2006-2008)

	Million EUR				Percentage share		
	2006	2007	2008	2008/07	2006	2007	2008
TV licences	1,763	1,764	1,883	6.7%	22.6%	23.1%	24.0%
TV subscriptions	3,157	3,245	3,351	3.3%	40.5%	42.5%	42.7%
Physical video (sales/rentals)	1,737	1,543	1,414	-8.4%	22.3%	20.2%	18.0%
VoD	14	29	53	82.8%	0.2%	0.4%	0.7%
Cinema	1,121	1,058	1,139	7.7%	14.4%	13.8%	14.5%
TOTAL	7,792	7,639	7,840	2.6%	100.0%	100.0%	100.0%
Source: CNC, based on French Finance Act data and figures from IDATE, GfK/NPA and SEVN.							
	2006	2007	2008	2008/07	2006	2007	2008
Physical video (sales/rentals)	1,737	1,543	1,414	-0.084	99.2%	98.2%	96.4%
VoD	14	29	53	0.828	0.8%	1.8%	3.6%
Total Video	1,751	1,572	1,467	-0.067	100.0%	100.0%	100.0%
Source: European Audiovisual Observatory, based on CNC data.							

For the UK (Table 26) the revenues of VOD are compared to the total video sales. The revenue for VOD was 120 million GBP in 2008 and 92 million GBP in 2007, which is an increase of 30%. In 2008, the revenue for VOD was 6.7% of the total video revenues. Lastly, in the United States, the rental and retail VOD revenues amounted to 2,327 million US\$ in 2008, and 1,750 million US\$ in 2007, which represents a percentage share of respectively 8.7% and 6.8% of the total film rental and retail market (Table 27).

Table 26: Film industry revenues in the United Kingdom (2007-2008)

	in GBP million.			percentage share	
	2007	2008	2008/07	2007	2008
DVD/video rental	297	219	-0.263	16.2%	12.2%
Sell-through DVD/video	1,440	1,454	0.01	78.7%	81.1%
<i>nVoD and VoD</i>	92	120	0.304	5.0%	6.7%
Total physical video/nVoD/VoD	1,829	1,793	-0.02	100.0%	100.0%

Source: European Audiovisual Observatory based on UK Film Council data

Table 27: The size of the physical video and VoD market in the United States (2007-2008)

	in USD million.			percentage share	
	2007	2008	2008/07	2007	2008
In-store rental	6,215	5,797	-6.7%	24.0%	21.7%
Vending	198	377	90.4%	0.8%	1.4%
By-mail rental	1,789	2,128	18.9%	6.9%	8.0%
Physical film rental market	8,202	8,302	1.2%	31.7%	31.1%
Cable video-on-demand ("VoD")	1,038	1,164	12.1%	4.0%	4.4%
Digital VoD	166	258	55.4%	0.6%	1.0%
Subscription VoD	277	468	69.0%	1.1%	1.8%
Digital film rental market	1,481	1,890	27.6%	5.7%	7.1%
Total film rental market	9,683	10,192	5.3%	37.4%	38.2%
Physical retail	15,946	16,083	0.9%	61.6%	60.2%
Digital retail	269	437	62.5%	1.0%	1.6%
Film retail market	16,215	16,520	1.9%	62.6%	61.8%
Total VoD rental + retail	1,750	2,327	33.0%	6.8%	8.7%
Total film rental and retail market	25,898	26,712	3.1%	100.0%	100.0%

Source: Blockbuster Inc. (based on Adams Media Research data).

In Europe, different types of players (telecommunications operators, cable operators, broadcasters, retailers, producers, film libraries, etc.) invested money on this new market in 2007-2008, according to the European Audiovisual Observatory. Table 28 and Table 29 provide an overview of leading entertainment retailers in Europe that offer VOD and online video rental and VOD companies and their operating revenues.

Table 28: Leading entertainment retailers²⁵ offering VOD (2006-2008) (Operating revenues in EUR thousand)

	Country	On-line rental	On-line sales	On-line Music	VoD	2006	2007	2008	2008/2007
CDON AB	SE		X	X	X	78,620	94,436	79,645	-15.7%
Virgin Stores	FR		X	X	X	367,638	376,841	258,145	-31.5%
Free Record Shop Holding B.V. ²⁶	NL		X	X	X	323,205	325,402	332,695	2.2%
iTunes S.A.R.L.	LU			X	X	132,200	224,500	353,400	57.4%
FNAC (cons.)	FR		X	X	X	4,266,900	4,583,000	4,587,000	0.1%
Media Markt Saturn (cons.)	DE		X	X	X (Italy)	15,156,000	17,122,000	19,000,000	11.0%

Source: European Audiovisual Observatory.

²⁵ Videogame retailers not included.

²⁶ On-line sales services (music and VoD) interrupted in June 2009.

Table 29: Video rental and VoD companies (2006-2008) (Operating revenues in EUR thousand)

	Country	On-line rental	On-line sales	VoD	2006	2007	2008	2008/2007
Lovefilm International Ltd	GB	X		X	61,785	67,028	76,544	14.2%
Filmflex Movies Ltd	GB			X	24,159	33,340	28,949	-13.2%
Videobuster Entertainment GmbH	DE	X		X	n.c.	n.c.	25,000	n.a.
Lovefilm UK (4)	GB	X		X	–	–	17,323	–
Glow Entertainment Group	FR	X		X	4,297	5,944	5,640	-5.1%
Lovefilm Sverige	SE	X		X	2,334	5,800	4,830	-16.7%
Locafilm Interactive	FR	X			1,189	2,171	3,604	66.0%
Lovefilm Norge AS	NO	X		X	2,133	2,192	n.a.	n.a.

Source: European Audiovisual Observatory.

Remarkably, new players such as video game companies are trying to move into in the VOD market. Microsoft's Xbox 360 and Sony's Playstation 3 offer catalogues of films. The Apple iTunes Store and Microsoft are mentioned as being world leaders in the VOD markets, but no exact sales numbers are known (EAO, 2009b).

5.3.4. New market entrants

YouTube and iTunes are often referred to as remarkable new market entrants in the film and audiovisual sector. Although YouTube (since 2006 owned by Google) is mainly focused on user generated content, OECD considers it as a new venue for products of the commercial film and video distributors and thus states that it has an increasingly significant role in the digital content market place. Table 30 provides an overview of the estimated worldwide revenues of YouTube as calculated by ComScore Media Metrix. The net revenue was estimated to be 244 million US\$ in 2008 and 472 million US\$ in 2009, based on the advertising cost per mille, amount of page views and the revenue from monetizable videos.

Table 30: Estimated sales figures YouTube (million US\$)

	2008	2009
Current Annualized WW Page Views	476,863	673,573
Y/Y Growth	113%	41%
CPM	\$0.79	\$1.08
Estimated YouTube Gross Revenue	\$375	\$727
% of YouTube Revenue with Revenue Share	50%	50%
YouTube Revenue from Monetizable Videos	\$187	\$363
Revenues Share	70%	70%
Net Revenue Post Rev Share	\$56	\$109
Total Net Revenue²⁷	244	472

Source: City Investment Research and Analysis: ComScore Media Metrix.

Following its success with music downloads on iTunes, Apple successfully launched video downloads on its iTunes site, and integrated them with video iPods (OECD, 2008b). Table 31 provides an overview of the estimated revenues of iTunes. Since the launch of iTunes in 2003,

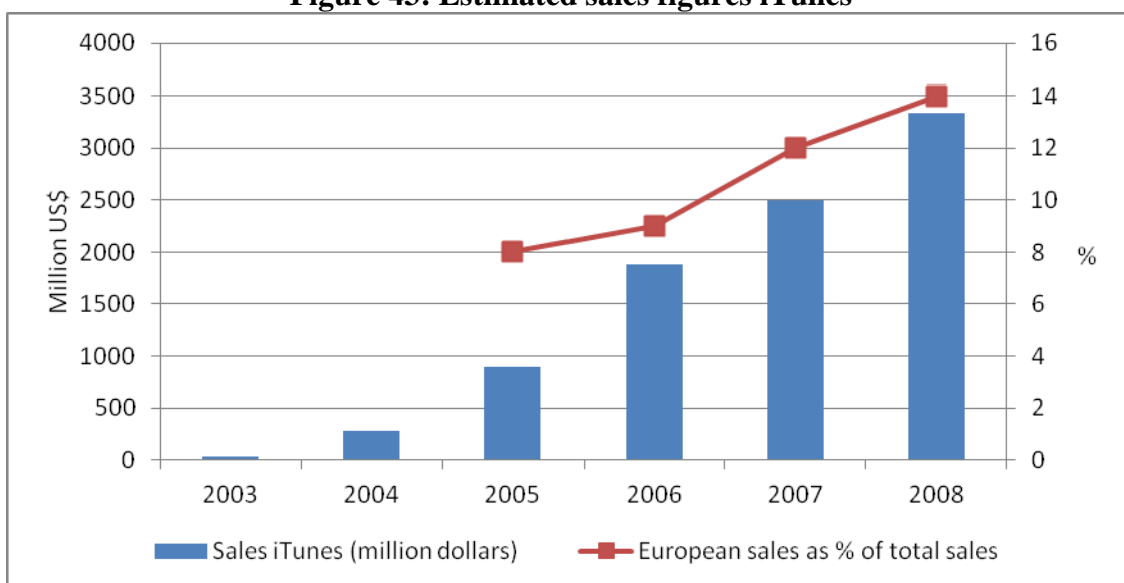
²⁷ Gross revenue + net revenue post rev share – revenue from monetizable videos.

sales increased from \$36 million in 2003 to \$3340 in 2008. The European sales account for an increasing percentage of the sales, from 8% in 2005 to 14% in 2008.

Table 31: Estimated sales figures iTunes

	2003	2004	2005	2006	2007	2008
Sales iTunes (million dollars)	36	278	899	1,885	2,496	3,340
% of total Apple Inc.	0.6	3.4	6.5	9.8	10.4	10.3
Sales iTunes Europe			70	175	297	469
% total of total iTunes			8	9	12	14

Figure 43: Estimated sales figures iTunes



Source: Apple Inc / European Audiovisual Observatory.

5.3.5. New business and pricing models

Table 32 lists some new business and pricing models for the filmed entertainment market. On-demand streaming, on-demand downloading, download and burn and peer-to-peer downloading are new models suitable for VOD. Table 32 provides an overview of the costs of VOD for five major American VOD providers. The prices range from \$2 for an episode of a television show, to \$15 to own a movie in 2008.

Table 32: Prices of VoD of a selection of legal download sites in 2008 (OECD, 2008b)

Provider	Cost
Amazon Unbox	\$2 per episode of a television show
	\$3-4 for rental movies
	\$10-15 to own movies
Apple iTunes store	\$2 per episode of a television show
	\$10-15 to own movies
	\$2 for short movies
BitTorrent, Inc	Free
CinemaNow (US market)	\$29.95 for monthly subscription
	\$99.95 for yearly subscription
Wal-Mart	\$2 per episode of a television show
	\$7.50-15 to own movies

Source: OECD, 2008.

5.3.6. Music

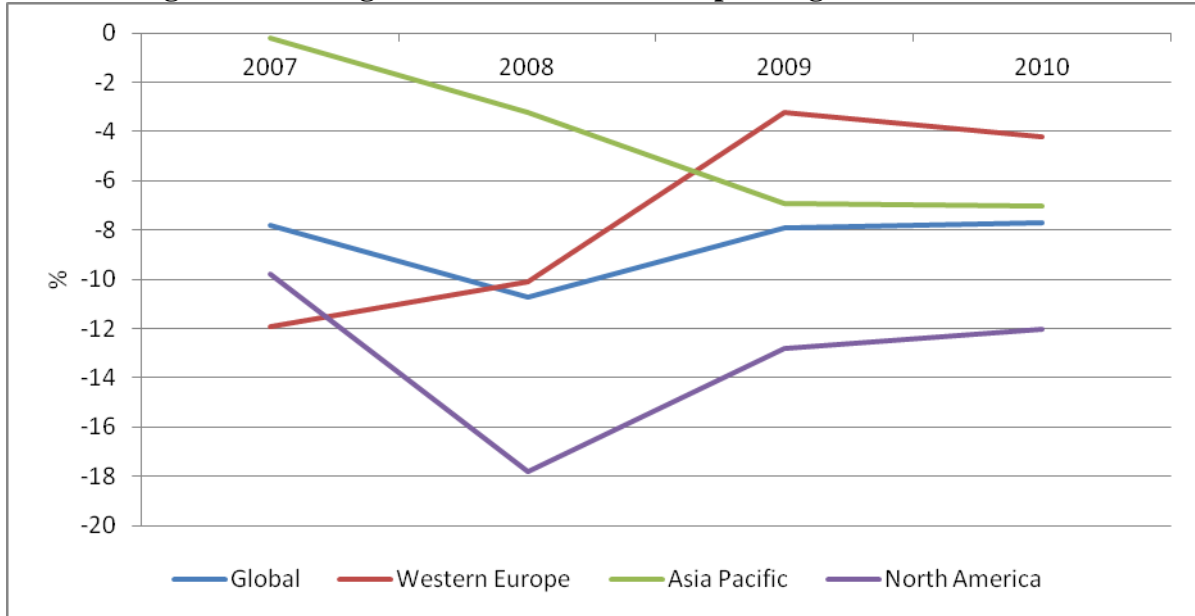
The global music industry has been declining in the last five years according to the PwC Global Entertainment and Media Outlook, as can be seen in Table 33 and Figure 44. The global spending on recorded music was decreasing rapidly from 2006 to 2010. When zooming in on the continents, it stands out that the largest declines in spending on recorded music are experienced in North America. In Western Europe, the decline was larger in 2007, but the recovery seems faster. Spending on recorded music in Asia Pacific has caught up with other regions in terms of declining markets. While Japan, a large player on the music market, experienced a decrease in spending in the past few years, South Korea experienced an increase of up to 38% in 2009.

Table 33: Consumer/end-user spending on recorded music (PwC and Wilkofsky Gruen Associates, 2011) (\$ millions)

	2006	2007	2008	2009	2010
Global	33492	30884	27586	25393	23440
% Change		-7.8	-10.7	-7.9	-7.7
Western Europe	10300	9076	8162	7901	7571
% Change		-11.9	-10.1	-3.2	-4.2
Asia Pacific	8531	8517	8242	7673	7135
% Change		-0.2	-3.2	-6.9	-7
North America	12461	11246	9242	8058	7093
% Change		-9.8	-17.8	-12.8	-12
United States	11728	10615	8667	7524	6599
% Change		-9.5	-18.4	-13.2	-12.3
Japan	6824	6894	6684	6021	5460
% Change		1	-3	-9.9	-9.3
Germany	2260	2189	2096	2027	2033
% Change		-3.1	-4.2	-3.3	0.3
UK	2643	2346	1998	2074	2026
% Change		-11.2	-14.8	3.8	-2.3
France	1577	1316	1151	1120	1065
% Change		-16.6	-12.5	-2.7	-4.9
South Korea	187	203	221	304	361
% Change		8.6	8.9	37.6	18.8
Netherlands	426	393	368	350	297
% Change		-7.7	-6.4	-4.9	-15.1
Spain	744	400	362	299	268
% Change		-46.2	-9.5	-17.4	-10.4
India	159	158	137	135	187
% Change		-0.6	-13.3	-1.5	38.5
Denmark	197	197	195	189	178
% Change		0	-1	-3.1	-5.8
China	160	146	149	154	165
% Change		-8.8	2.1	3.4	7.1
Finland	102	100	96	87	81
% Change		-2	-4	-9.4	-6.9

Source: PwC (2011).

Figure 44: Change in consumer/end-user spending on recorded music



Source: PwC and Wilkofsky Gruen Associates, 2011.

File sharing

In the last decade, peer to peer (P2P) networks provided consumers with a new way of sharing and searching digital content, because each P2P-user is both client and server. However, the use of these networks became increasingly associated with piracy, as most of the data shared in P2P networks was shared illegally.²⁸ Napster is considered to be the first worldwide P2P service and was followed by numerous similar initiatives, such as BitTorrent, Kazaa and LimeWire. The traffic share of P2P has been growing ever since the creation of Napster. In 2001 it reached its top with 13.6 million users. In 2004, Napster changed into a paid music service due to several lawsuits concerning copyright issues. On the P2P networks that are most popular in 2010, files are still shared illegally. The effects of illegal file sharing are continuously felt by the media and content sector. According to the international music industry association IFPI worldwide music sales dropped around 30% between 2004 and 2009, according to them mainly due to piracy (IFPI, 2010),²⁹ and revenues lost by the music sector due to P2P piracy in 2007 are estimated at \$3.7 billion in the USA alone (IPI, 2007).

Although it is difficult to understand the true impact of illegal file sharing on the industry, it is clear that every file downloaded does not result automatically in one less CD or DVD sold. TNO conducted a statistical analysis and calculated the effect of illegal file sharing on the music industry for the Dutch market through a welfare-theoretical approach. They calculated the substitution ratio for the Dutch music industry, and estimated a substitution ratio of at most 5-7%. In other words: for every 15-20 downloads one track less is sold. However, the economic implications of file sharing for the level of welfare in the Netherlands were found to be strongly positive in the short and long terms, because downloaders buy the same amount of music as non-downloaders, and more games and DVDs than non-downloaders. Moreover, downloaders go to more concerts and buy more merchandise (TNO, 2009). It should however

²⁸ OECD (2009) Piracy of digital content.

²⁹ IFPI does not state their definition of “worldwide”, but as their data is based on PwC, they are likely to use the same definition.

be noted that because of the fact that this study is focused on a single country, its conclusions can not be generalized to the EU as a whole without further investigation.

Online distribution and revenues

The rise of online distribution of music strongly impacted the traditional music industry. While digital distribution of music is increasing, physical distribution, which still has the largest revenue share, keeps decreasing, as can be seen in Table 34 and Table 35. According to PwC, digital platforms accounted for around 31% of worldwide recorded music sales in 2010, up from hardly anything in 2003, when iTunes entered the market. In the US, the world's largest music market, spending on digital recorded music increased to 45% of total music sales in 2010 and in South Korea to 60%.

Table 34: Consumer/end-user spending on digital recorded music (PwC and Wilkofsky Gruen Associates, 2011).

	2006	2007	2008	2009	2010
Global	3629	5154	6144	6729	7191
% of total spending recorded music	11%	17%	22%	26%	31%
North America	1891	2697	3006	3085	3094
% of total spending recorded music	15%	24%	33%	38%	44%
US	1859	2629	2909	2972	2966
% of total spending recorded music	16%	25%	34%	40%	45%
Western Europe	526	727	1003	1299	1560
% of total spending recorded music	5%	8%	12%	16%	21%
Denmark	9	17	32	41	48
% of total spending recorded music	5%	9%	16%	22%	27%
Finland	3	5	7	11	15
% of total spending recorded music	3%	5%	7%	13%	19%
France	111	131	204	204	232
% of total spending recorded music	7%	10%	18%	18%	22%
Germany	103	122	139	183	244
% of total spending recorded music	5%	6%	7%	9%	12%
Netherlands	19	21	23	27	32
% of total spending recorded music	4%	5%	6%	8%	11%
Spain	34	38	41	45	49
% of total spending recorded music	5%	10%	11%	15%	18%
UK	134	238	361	530	636
% of total spending recorded music	5%	10%	18%	26%	31%
India	13	17	22	48	113
% of total spending recorded music	8%	11%	16%	36%	60%
Japan	790	1115	1338	1344	1270
% of total spending recorded music	12%	16%	20%	22%	23%

Source: PwC (2011).

Table 35: Revenues in global recorded music market by component, US-\$ millions (PwC and Wilkofsky Gruen Associates, 2011).

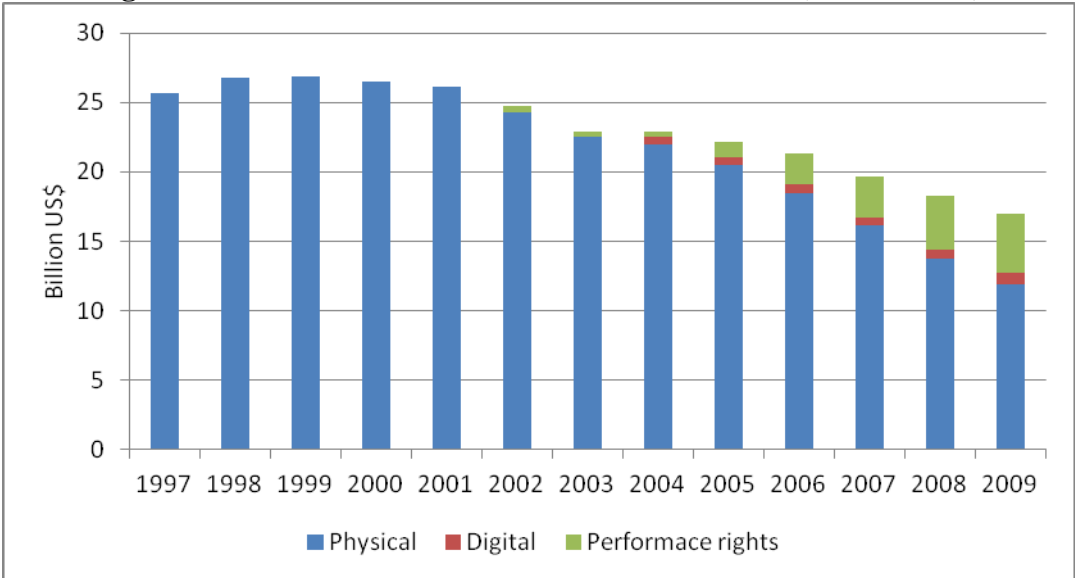
	2005	2006	2007	2008	2009
	2006	2007	2008	2009	2010
Digital	3629	5154	6144	6729	7191
% change		42	19.2	9.5	6.9
Physical	29863	25730	21442	18664	16249
% change		-13.8	-16.7	-13	-12.9

Source: PwC (2011).

In Western Europe and the US, a considerable part of the music is consumed through digital channels. On average 70% of all music consumed in the USA, UK, France and Germany was consumed through the internet (downloads, streaming radio, etc.) or other digital platforms. However, revenues from digital platforms accounted for only 35% of industry revenues on average in these countries (IFPI, 2010). Although this is more than the global digital revenue share (27% according to IFPI), revenues are still relatively low, considering the fact that music is mainly consumed through digital channels. There are several potential reasons for this difference. Firstly the difference between the share of digital consumption in total consumption and the share of revenues from digital platforms compared to offline revenues could be the result of (illegal) file sharing in P2P networks. Secondly digital music sales seems to have reduced the price consumers are willing to pay for music, according to Cap Gemini from an average of 27 US\$ per album in 1996 to less than 14 US\$ in 2008 (Capgemini, 2008).

IFPI data also indicate that the rise in digital revenues and the slight rise of revenues from performance rights have not managed to compensate for the loss in revenues from physical distribution (Figure 45).

Figure 45: Global Recorded Music Sales 1997-2009 (US\$ billions)



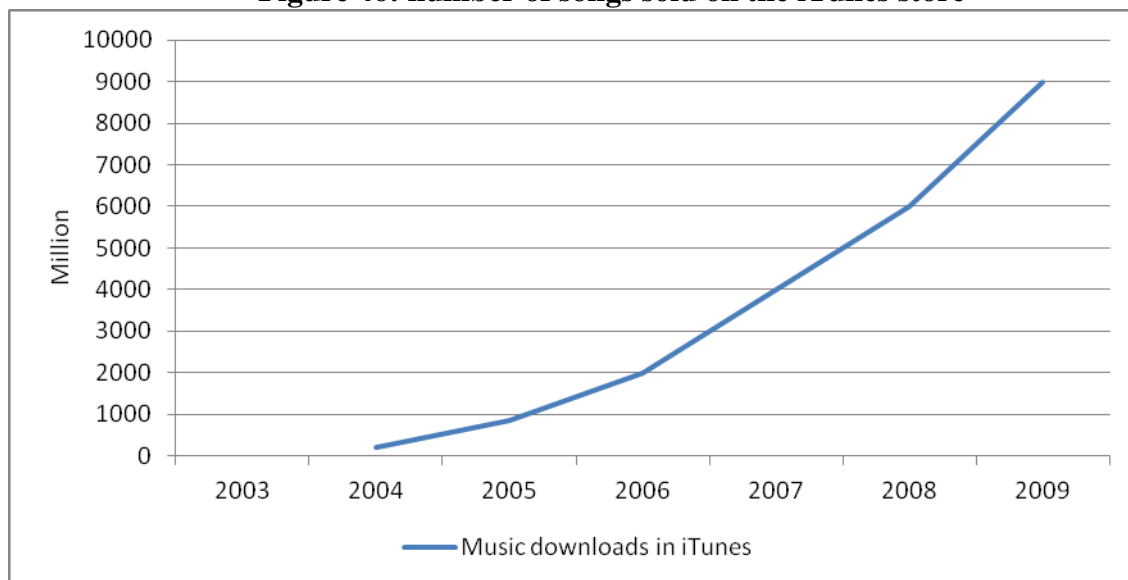
Source: IFPI.

New market entrants

Key players in terms of revenues from the global digital music market between 2005-2009 are the iTunes Music Store, eMusic, Napster, Rhapsody, 7digital and Wal-Mart Music Downloads (in the extended PwC business insights, statistics about the key players are available) (Business Insights, 2009). Remarkably, the traditional music industry hardly seems to play a role in the online sale of digital music, although they are likely to benefit indirectly through deals with their online resellers.

New market entrants from non-MCI industries can have a significant influence on the music sector. Especially iTunes, which was launched in 2003, had a great impact. In April 2008, iTunes announced that it surpassed Wal-Mart to become the number one music retailer in the USA, accounting for 25% of the overall music market (Apple, 2010; IFPI, 2010). In 2007, iTunes accounted for 70% of worldwide online digital music sales (Reuters, 2007; Wired, 2008). Figure 46 shows an overview of the number of songs sold on the iTunes store from 2003 to 2010.

Figure 46: number of songs sold on the iTunes store



Source: Wikipedia, based on sales data of Apple.

Music companies have partnered with new, ad-supported services like Spotify, Last.fm, Deezer, MySpace Music and We7 and online video channels such as Hulu and VEVO (IFPI, 2010).

In the music industry, Spotify and similar free (mainly advertisement funded) music streamers compete with piracy, but also with other on- and offline music sellers. On Spotify, users can create playlists and share them with their friends. The Swedish music company has more than ten million members (October 2010), of which one out of twenty pays for the service (in September 2010). Record labels such as Sony BMG, Universal Music and EMI try to join the hype and jointly own a total of 18 % of Spotify (Techcrunch, 2010; Spotify).

5.3.7. Publishing industry (newspapers, books, periodicals and other publishing activities)

Within the traditional publishing industry online distribution has so far had the largest impact on the publishing of news, as the internet has become the second medium of choice (after television) for news consumption, leaving newspapers behind (WAN IFRA, 2009). Revenues in the newspaper industry declined 11% in 2009 and remained stable in 2010 (see PwC figures in Table 36), whereas in 2007 revenues showed a small growth. However, digital news

so far has not been able to provide a profitable replacement for printed newspapers. Although digital advertising incomes have been increasing (except a decrease in 2009), as a share of the total advertising income in 2008 it only amounted to only 7% in 2010.

Spending on books was rising slowly from 2006 until 2008, but 2009 shows a decrease of 1.4% as compared to 2008. In 2010 there was a minor increase. And although still small compared to physical books, the sale of electronic books has been increasing fast: the spending on electronic books almost doubled on a yearly basis from 2006 to 2010. The consumer magazines industry was quite steady until 2008, but the recession impacted the industry, resulting in a 2.1% decrease in spending in 2009, to a 10.6% decrease in 2010.

Table 36: Global consumer market in print industry (US-\$ millions)

	2006	2007	2008	2009	2010
Print advertising newspapers	111962	109732	100341	81525	80885
% Change		-2,0	-8,6	-18,8	-0,8
Digital advertising newspapers	4127	5369	5842	5634	6404
% Change		30,1	8,8	-3,6	13,7
Circulation newspapers	69503	71756	73137	72534	72457
% Change		3,2	1,9	-0,8	-0,1
Total newspapers	185592	186857	179320	159693	159746
% Change		0,7	-4,0	-10,9	0,0
Spending on books	104061	109569	110072	108499	108691
% Change		5,3	0,5	-1,4	0,2
Spending on electronic books	557	889	1258	1841	2784
% Change		59,6	41,5	46,3	51,2
Total books	104061	109569	110072	108499	108691
% Change		5,3	0,5	-1,4	0,2
Print advertising consumer magazines	34351	35385	33926	27087	27512
% Change		3,0	-4,1	-20,2	1,6
Digital advertising consumer magazines	453	783	1436	1436	1721
% Change		72,8	83,4	0,0	19,8
Circulation consumer magazines	46,171	46,159	46,569	45,789	43,902
% Change		0,0	0,9	-1,7	-4,1
Total consumer magazines	78,605	79,741	81,624	79,931	71,475
% Change		1,4	2,4	-2,1	-10,6

Source: PwC (2011).

5.3.8. Newspapers

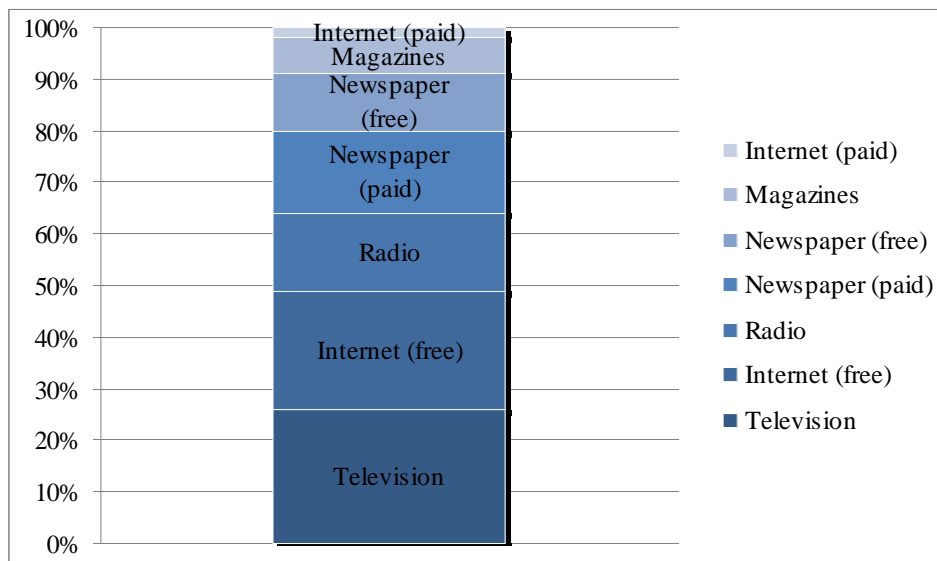
Online news has become a popular source of news and the internet has overtaken newspapers in popularity as a news source (Figure 47). However, in the first decade of the 21st century, print remains the main revenue driver for newspaper publishers (PwC, 2009). Digital advertising accounted for 2% of the spending on newspapers in 2005, rising only to 4% in 2009 (Table 37). Nevertheless, the potential for digital online growth is widely recognized due to rising website traffic, and therefore, new business models are incorporated by the traditional news industry and new market entrants that focus only on online news provision. There is little evidence for proven concepts of online business models for news. However, innovative new business models are invented, ranging from a focus on hyperlocal content to publicly supported not-for-profit journalism (News Innovation, 2009).

Table 37: Worldwide digital advertising/total spending on newspapers

	2005	2006	2007	2008	2009
Newspaper digital advertising revenues	4127	5369	5842	5634	6404
Digital advertising as percentage of total spending on newspapers (advertising and circulation)	2%	3%	3%	4%	4%

Source: PwC (2011.)

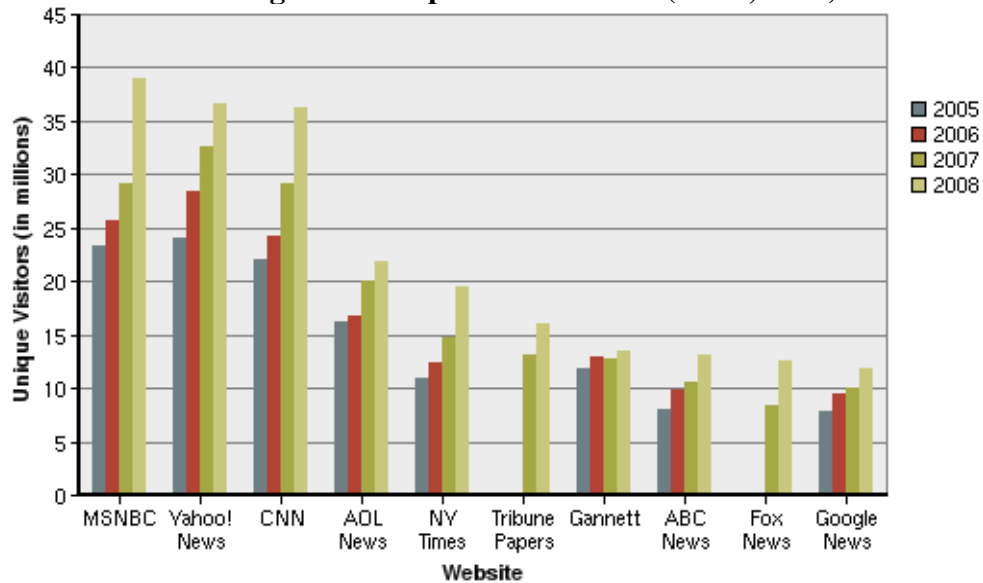
Figure 47: Media preference when gathering news and background information (based on a survey in Canada, France, Germany, the Netherlands, Switzerland, the United Kingdom and the United States in 2009) (PwC, 2009).



Source: PwC (2009) Newspaper consumer survey.

The Pew Center for Excellence in Journalism issued “The State of the News Media,” featuring the top 10 news sites in the USA ranked by unique visitors (Figure 48) from 2005 to 2008, based on an internet panel survey conducted by Nielsen. Remarkably, only three news organizations (New York Times, Gannett and Tribune) are in the top 10. In 2008, the three traditional newspaper organizations accounted for 22% of the total unique visitors among the top 10. This might indicate that newspaper companies are losing their print audience slowly to online news sources.

Figure 48: Top News Websites (PEW, 2009)



Source: Nielsen.

5.3.9. Books

Online distribution and revenues

Electronic books are still a marginal compared to the overall spending on books, as can be seen in Table 38. Free online book services such as Google Books (a service from Google that searches the full text of books that Google has scanned, converted to text using optical character recognition, and stored in its digital database) are considered a serious threat to the traditional book industry. However, the true effects of these services on the sector are as yet largely unknown.

Table 38 shows that the spending on electronic books is slowly increasing. Especially in the professional book sector, the share of electronic books is growing steadily.

Table 38: Worldwide spending on electronic books as a percentage of total spending on books in (million US\$)

	2006	2007	2008	2009	2010
Global consumer book publishing	325	588	875	1283	1989
% of total spending on consumer books	0%	1%	1%	2%	3%
Consumer book publishing in North America	96	122	203	500	1019
% of total spending on consumer books	0%	1%	1%	2%	5%
Consumer book publishing in Asia Pacific	229	452	653	752	875
% of total spending on consumer books	2%	3%	4%	4%	5%
Consumer book publishing in United States	95	120	200	495	1000
% of total spending on consumer books	0%	1%	1%	2%	5%
Consumer book publishing in Western Europe	0	11	14	22	78
% of total spending on consumer books	0%	0%	0%	0%	0%
Consumer book publishing in United Kingdom	0	2	2	3	9
% of total spending on consumer books	0%	0%	0%	0%	0%
	2006	2007	2008	2009	2010
Global electronic educational book publishing	232	301	383	558	795
% of total spending on educational books	1%	1%	1%	1%	2%
Electronic educational book publishing in North America	221	265	320	447	605
% of total spending on educational books	2%	2%	3%	4%	5%
Electronic educational book publishing in Asia Pacific	9	20	39	49	74
% of total spending on educational books	0%	0%	0%	0%	1%
Electronic educational book publishing in United States	216	258	310	435	588
% of total spending on educational books	2%	2%	3%	4%	5%
Electronic educational book publishing in Western Europe	1	10	13	43	87
% of total spending on educational books	0%	0%	0%	0%	1%
Electronic educational book publishing in United Kingdom	0	3	5	6	9
% of total spending on educational books	0%	0%	0%	0%	1%
	2006	2007	2008	2009	2010
Global professional book electronic	656	810	1007	1086	1215
% of total spending on professional books	3%	4%	5%	5%	6%
Professional book electronic in North America	590	691	781	821	891
% of total spending on professional books	9%	10%	11%	12%	13%
Professional book electronic in Asia Pacific	44	75	148	171	210
% of total spending on professional books	1%	2%	3%	4%	4%
Professional book electronic in United States	570	660	740	775	840
% of total spending on professional books	9%	10%	11%	12%	13%
Professional book electronic in Western Europe	20	40	65	79	95
% of total spending on professional books	0%	0%	1%	1%	1%
Professional book electronic in United Kingdom	11	20	31	37	43
% of total spending on professional books	1%	3%	4%	5%	6%

Source: PwC (2011).

6. EU 27 Competitiveness and the Single Market

6.1 Introduction

In this chapter we will look at indicators that determine the competitiveness of the European MCI. Porter defines the competitiveness of a location (a country or a sector) as the productivity that companies in that particular location can achieve (Porter, 1990). Others also look at the ability to sell on international markets (Ketel, 2006). Commonly used indicators used to express the competitiveness of an industry are its labour productivity, specialisation index and trade balance. In the European Competition Reports (EC, 2010) many other indicators of economic health, vitality and growth potential are used as well.

Often the extent to which the EU27 can function as a single market is seen as a precondition to increasing the competitiveness of the EU vis-à-vis the US and Asian markets. In this chapter we will therefore first try to find some evidence for the extent to which MCI are operating in a single European market or whether they are mainly catering for national markets. We will do this by looking at the level of intra-EU imports and exports, based on Eurostat data. These data indicate the exports and imports of EU Member States to and from other EU Member States.

Secondly we will look at the external competitiveness of the EU27, where the EU27 is compared to its major competitors, the US and Japan, China and India. We combine official and unofficial statistical data on the competitiveness of the European markets for recorded music, filmed entertainment (film, TV, video) and publishing activities (news, books) as compared to (predominantly) the US and Asia. In this report competitiveness is measured in terms of:

- a) imports and exports to and from outside the EU;
- b) the relative market shares the share of domestically produced media and content products/services compared to the share of the US and other non EU media and content products/services, based on turn-over figures and
- c) the share of European MCI companies in the top 20 of MCI companies.

We will discuss the developments in size of the market and developments in trade balance for the MCI market as a whole. In the following paragraphs we discuss these developments separately for the audiovisual industry (6.2.1), music (6.2.2) and publishing (6.2.3).

6.2 Trade balance

The trade balance is an important determinant of a country's output. The trade balance, also referred to as net exports, is calculated as *the difference between the total value of exported goods and services (X) and the total value of imported goods and services (M)*. Whereas overall welfare is determined primarily by productivity in both traded and non-traded sectors of the economy, a positive trade balance (X-M) adds to the strength of an economy. This also applies to sectors within the economy.

Table 39 gives an overview of the trade balance in each of the relevant MCI sub-sectors by 2007 as well as their annual average growth rate over the period 1995-2007. Both the publishing and the recreational, cultural and sporting sector showed a strongly negative trade balance in 2007, with a total trade deficit for the European MCI sector as a whole amounting to 1,291 million EUR. The publishing industry imported 320 million EUR more than it

exported, whereas the recreational, cultural and sporting industry imported about 971 million EUR more than it exported in 2007. The publishing of newspapers sub-sector showed the most dramatic figures (237 million EUR), particularly due to a large trade deficit in Germany (see Annex F, Table 95). The publishing of sound recordings and other publishing were the only sub-sectors with a slightly positive trade balance of respectively 18 and 23 million EUR in 2007.

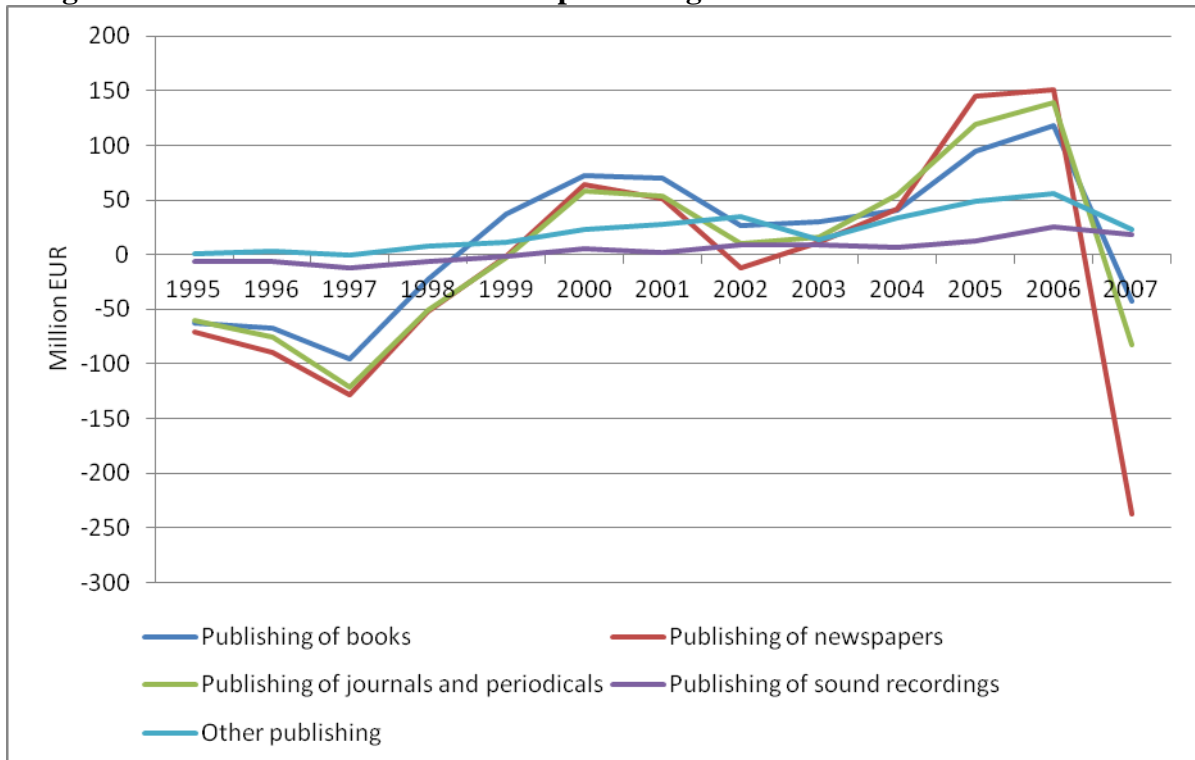
Table 39: Trade balance and annual average growth rate for the EU27 MCI industry

	<i>Trade balance</i>	<i>Annual average growth rate, 1995-</i>
	<i>2007</i>	<i>2007</i>
	<i>Million EUR</i>	<i>%</i>
<i>Total publishing</i>	-320	
Publishing of books	-42	-3.2
Publishing of newspapers	-237	10.6
Publishing of journals and periodicals	-82	2.6
Publishing of sound recordings	18	-10.9
Other publishing	23	32
Recreational, cultural and sporting activities	-971	-9.2
Total Media and Content Industries	-1,291	-7.5
Total EU economy	-71,324	-2.7

Source: Eurostat.

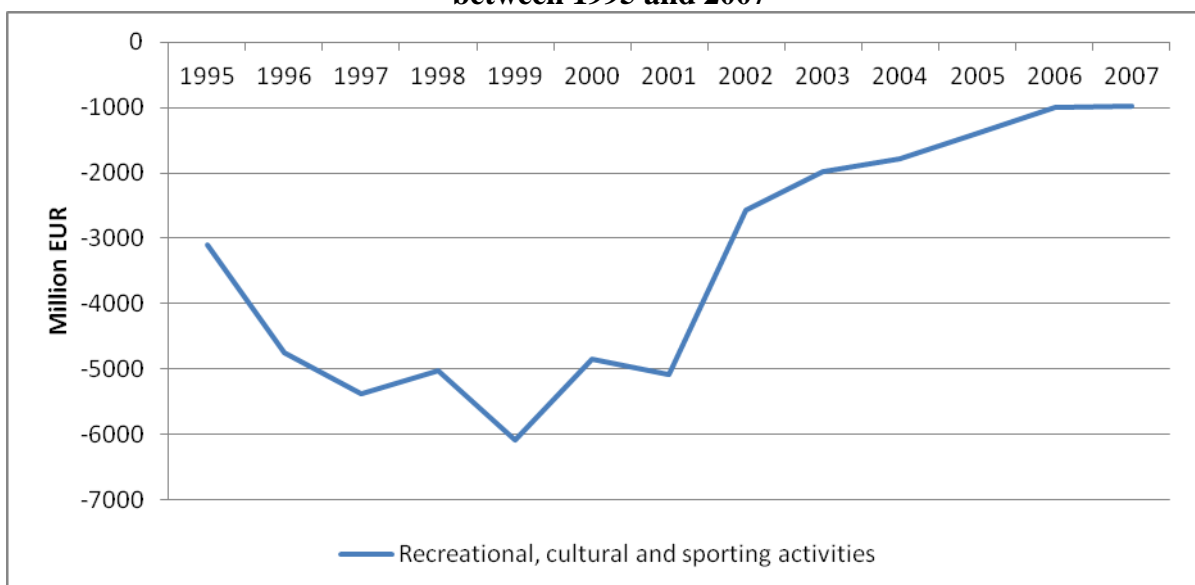
The net trade position of the MCI sector appears to have fluctuated rather dramatically during the period 1995-2007. Surprisingly, the MCI as a whole managed to decrease its total trade deficit by an average 7.5% a year. For the EU economy the trade deficit declined 2.7% annually. Remarkable differences can be observed between the publishing industry (overall increasing trade deficit) and the recreational, cultural and sporting industry (decreasing trade deficit).

Figure 49 shows the development in trade balance in each of the sub-sectors of the European publishing industry during the period 1995-2007. After 1999 most sub-sectors showed a very small positive trade balance, dropping again after 2000 / 2001. Between 2003 and 2006, net trade by the publishing industry was positive, dropping again dramatically after 2006. The drop was most severe in newspaper publishing, closely followed by the publishing of journals and periodicals sector.

Figure 49: Trade balance in the EU27 publishing sub-sectors between 1995 and 2007

Source: Eurostat.

Figure 50 shows the trade balance for the recreational, cultural and sporting industry. This industry experienced a remarkable improvement of its trade balance between 1999 and 2007. In 1999 the industry had a trade deficit of over 6 billion EUR, whereas in 2007 this figure had shrunk to a deficit of less than 1 billion EUR. Overall, its trade deficit declined by 9.2% between 1999 and 2007.

Figure 50: Trade balance in the EU27 recreational, cultural and sporting industry between 1995 and 2007

Source: Eurostat.

Share of EU companies in top 15 MCI companies

Another indicator for competitiveness is whether a country or region is the homebase of large firms. The European Audiovisual Observatory publishes overviews of the top 15 media companies, based on their annual turnover figures. The top 15 of media companies (Table 40) shows a remarkable increase in the amount of USA based companies. In 1988, seven of the fifteen companies were from the USA, growing to eight in 1998 and ten out of fifteen in 2008. Europe only has five companies in the top 15 media companies in 1988, four in 1998 and only three in 2008. For Asia, only Japan can be seen as a competitor for the USA, with three companies in the top 15 in 1988 and 1998, and two in 2008, of which one (Sony) is in second position.

Table 40: Top 15 media companies by country of origin in 1988, 1998 and 2008, in USD billion

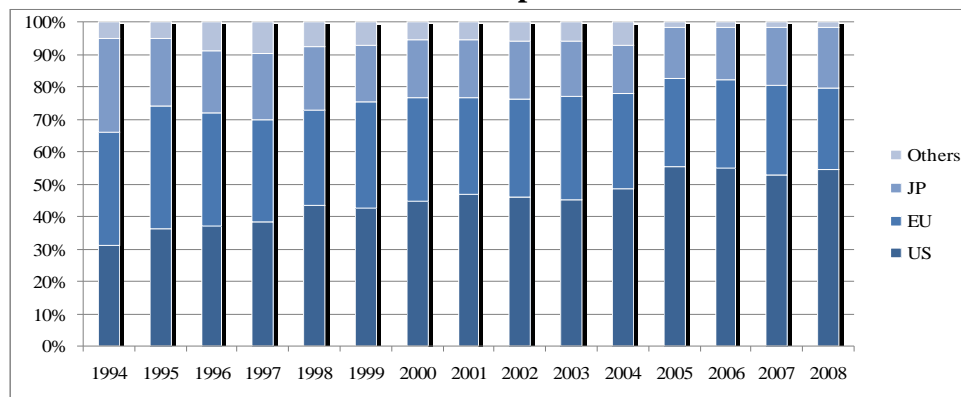
	1988			1998			2008		
	Group	Origin	Sales	Group	Origin	Turnover	Group	Origin	Turnover
1.	CC/ABC	US	3,749	Time Warner	US	17,640	Walt Disney	US	26,339
2.	GE/NBC	US	3,638	Walt Disney	US	17,184	Sony	JP	23,723
3.	ARD	DE	3,053	Sony	JP	15,454	Time Warner	US	22,552
4.	Fujisankei	JP	2,970	Viacom	US	9,079	News Corp	US	19,878
5.	CBS	US	2,780	Time Warner Ent.	US	8,373	DirecTV	US	19,693
6.	NHK	JP	2,752	News Corp	US	8,008	Nintendo	JP	18,761
7.	Sony	JP	2,655	CBS	US	6,805	NBC Universal	US	16,969
8.	BBC	UK	2,652	Seagram	US	6,682	Vivendi Universal	FR	15,921
9.	MCA	US	2,290	ARD	DE	6,039	Viacom	US	14,625
10.	Fininvest	IT	2,152	Nintendo	JP	5,400	CBS	US	10,952
11.	Warner	US	2,027	GE/NBC	US	5,269	Liberty Media	US	10,084
12.	RAI	IT	1,871	NHK	JP	4,964	Gamestop	US	8,806
13.	Paramount	US	1,862	BBC	UK	4,586	ARD	DE	8,352
14.	Polygram	NL	1,711	Bertelsmann	DE	4,372	Bertelsmann	DE	8,139
15.	Columbia	US	1,616	EMI Group	UK	3,931	Microsoft Ent.	US	7,753

Source: IBBT-SMIT, based on European Audiovisual Observatory, Statistical Yearbook 1996-1997, Yearbook 2002, Yearbook 2008.

6.2.1 The audiovisual industry

In this paragraph some more detail is provided for the competitive position of the European audiovisual industry. Figure 51 shows that whereas in 1994 the European audiovisual industry still had the largest global market share (based on the annual turnover of 50 leading world companies, by nationalities of those companies) of 35% versus 31% for the US and 29% for Japan, this has turned into a US dominance in 2008 of 54.5% versus 25.2 for the Europe and 18.75 for Japan. This resulted in a decrease in turnover of European audiovisual media companies.

Figure 51: Overview of the geographical shares of the global audiovisual market (1994-2008), Based on the annual turnover of 50 leading world companies, by nationalities of those companies



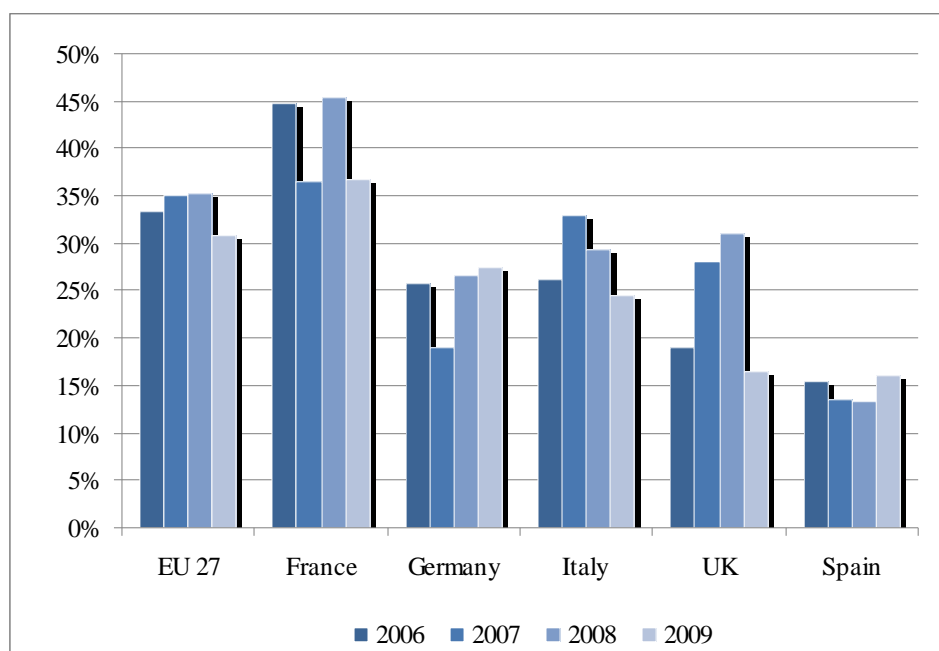
Source: IBBT-SMIT, based on data from the European Audiovisual Observatory 2005 and 2009 Yearbooks.

Film

According to KEA's 'Economy of culture in Europe' (2006) the single European market hardly exists for cinema. Production and distribution usually take place at a national level due to differences in language and culture.

Figure 52 shows the market shares of national and international movies in the EU27 and five European countries (selected by the EAO) from 2006 to 2009. As can be seen, national films accounted for 13.3% (Spain, 2008) to almost 45.4% (France, 2008) of the market share (in cinema admissions). The market share for non EU films can be mainly attributed to American companies. According to KEA (2006) US productions have a large market share on the European market because, contrary to the European productions, they benefit from the internal European market. This is illustrated by the fact that seven of the twenty largest film companies in Europe are subsidiaries of Hollywood based companies that work on both national and trans-national level (KEA, 2006). This is illustrated by the figures in Figure 52, which show that the market share of national films in the EU27 in 2009 is approximately 30%. France is the country with the highest share of European films. Although the shares fluctuate per year the figure seems to indicate a decline for EU27 films between 2006 and 2009.

Figure 52: Market shares of national and international films in the EU 27 and in a selection of EU countries from 2006 to 2009



Source: European Audiovisual Observatory (2010).

Table 41 provides an overview of the number of featured films that are produced in the EU, Japan, China and the USA. EU 27 produces most films, and the amount of films produced is growing over the years. In 2005, the USA produced more films than Europe, while from 2006 on EU takes the lead. The film production of Japan and China is growing, and steadily becoming a serious competitor of the USA, at least in terms of number of films produced.

Table 41: Number of feature films produced in the European Union, Japan, China and the USA (2004-2008).

	2004	2005	2006	2007	2008	2009 (prev)
EU 27	870	911	1043	1044	1140	1168
USA	?	920	928	909	716	677
Japan	310	356	417	407	418	456
China	212	260	330	402	406	448

Source: European Audiovisual Observatory (2010).

While Europe leads in terms of the number of films produced, in terms of admissions – and thus revenues – the US film industry is much stronger. Table 42 shows the amount of admissions (i.e. attendances) to films from the US, Europe and other countries in the EU 27 for the years 2005 to 2008. As can be seen in this table, films from the USA are dominating the European film theatres, with 62.5% in 2005 to 65.6% in 2008.

Table 42: Breakdown of admissions in the EU27 according to the country of origin

Region	2005	2006	2007	2008
U.S.	62.5%	63.4%	62.6%	65.6%
European films total	24.6%	27.9%	28.1%	28.2%
EUR inc / U.S. co-productions	10.3%	5.6%	7.5%	4.4%
Others	2.6%	3.2%	1.8%	1.8%

Source: European Audiovisual Observatory – Lumiere database.

There is a great variety between European countries in terms of the proportion of national, European non national and US films and TV programmes. Larger countries typically have stronger national content industry. For example the share of national films among theatre admissions ranged from 0.1% (Lithuania) to 37.1% (France) (Source: European Audiovisual Observatory).

Market shares of films by geographical origin

The market share of European films on the European market is decreasing, according to the European Audiovisual Observatory (see Table 43). Also, the market share for European films with US investment (such as *Harry Potter and the Half Blood Prince*), decreased from 6.8% in 2008 to 4.2% in 2009. The market share of US films on the other hand increased from 63.2% in 2008 to 67.1% in 2009, possibly due to the 3D and ‘blockbusterization’ trends (EAO, 2010).

Table 43: Market share of films by geographical origin on European market

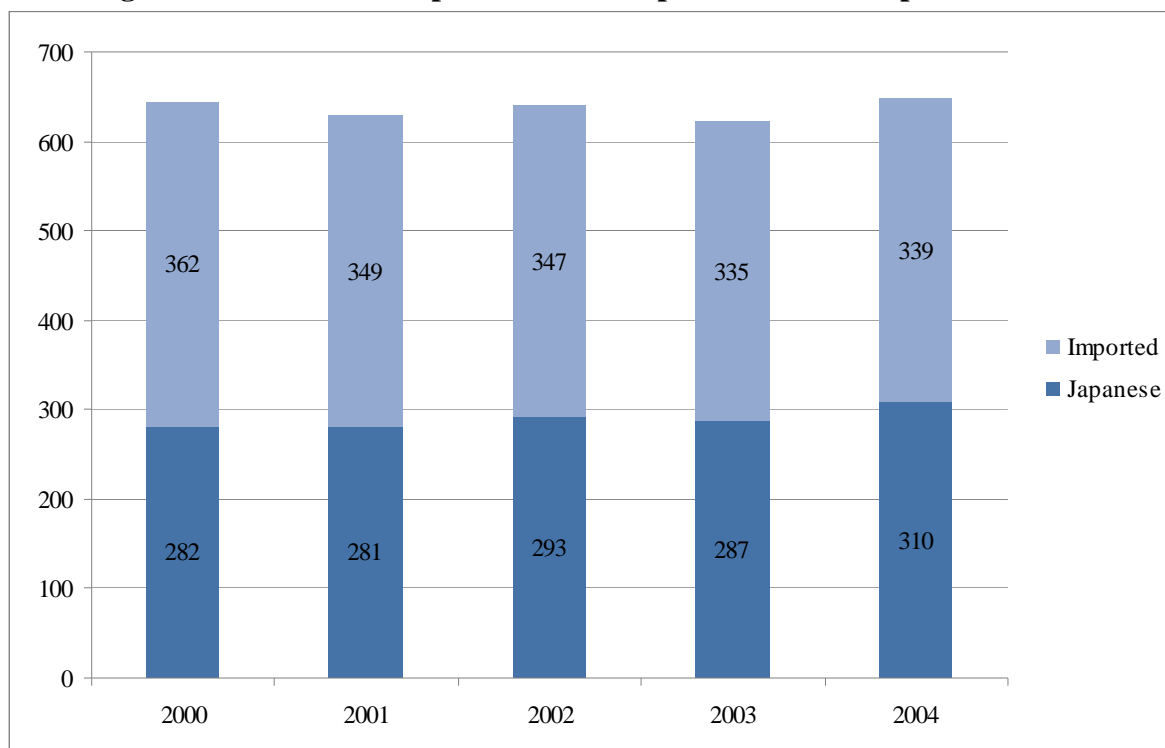
	2006	2007	2008	2009
US	64%	62.7%	63.2%	67.1%
EU incl. US	5.7%	6.3%	6.8%	4.2%
EU	27.6%	28.8%	28.4%	26.7%
Other	2.7%	2.2%	1.6%	2.0%

Source: EAO (2007, 2008, 2009, 2010).

On the US market, European films hardly have market share. In 2009, 91.8% of the films in cinemas was made in the US, 0.8% in Canada, and 7.4% of the films from the rest of the world. The UK is the main supplier of European films on the US market.

On the Asian market, US blockbusters are the main drivers behind market growth in 2009, while national market shares decreased (e.g. from 23% to 21% in Hong Kong and from 12% to 2.3% in Taiwan). Nevertheless, the market share of local films remains relatively high in Asia, with 56.6% in China, and 92% in India in 2009 (EAO 2010).

JETRO provides data for the share of local and foreign films on the Japanese market. The share of Japanese films is slowly rising, from 282 in 2000 to 310 (48%) in 2004 (Figure 53), of which 152 (44.8%) were from the USA (Table 44). A selection of European movies from the UK, Germany, France and Spain reaches the Japanese market. In total, they accounted for 18% of the foreign movies in 2000, 16% in 2001, 20% in 2002 and 13% in 2004.

Figure 53: Amount of imported versus Japanese films in Japan 2000-2004


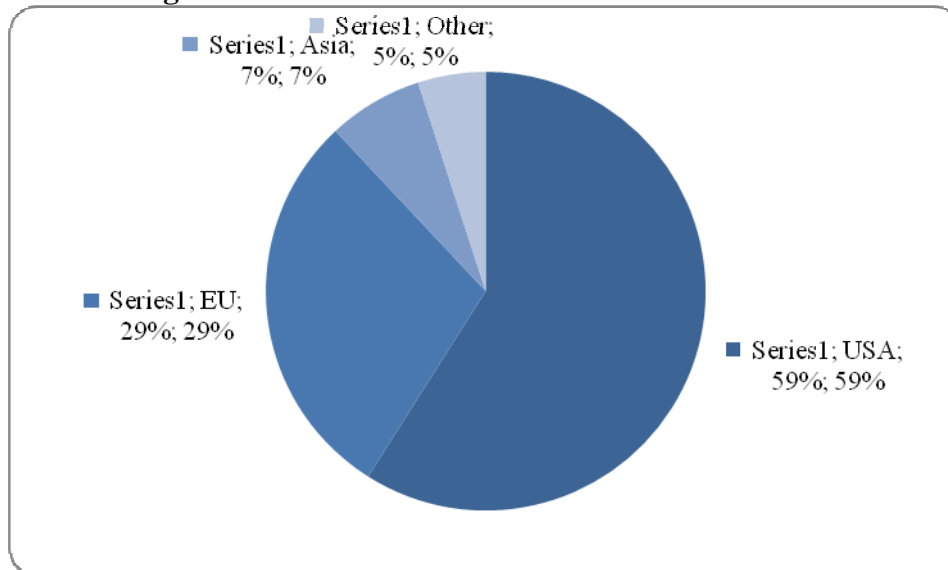
Source: JETRO (2005).

Table 44: Distribution of imported films in Japan by country. Amount of films and % of foreign films (2004)

	2001	Share	2002	Share	2003	Share	2004	Share
U.S.A.	159	45.6%	159	45.8%	152	45.4%	152	44.8%
France	30	8.6%	33	9.5%	36	10.7%	24	7.1%
U.K.	24	6.9%	9	2.6%	19	5.7%	10	2.9%
South Korea	20	5.7%	10	2.9%	14	4.2%	29	8.6%
Hong Kong	24	6.9%	14	4.0%	7	2.1%	10	2.9%
China	3	0.9%	8	2.3%	7	2.1%	7	2.1%
Germany	5	1.4%	7	2.0%	6	1.8%	7	2.1%
Canada	1	0.3%	4	1.2%	5	1.5%	1	0.3%
Spain	5	1.4%	6	1.7%	5	1.5%	3	0.9%
Others	78	22.3%	97	28.0%	84	25.1%	96	28.3%
Total	349	100.0%	347	100.0%	335	100.0%	339	100.0%

Source: JETRO (2005).

When focusing on the Chinese film import market, USA content is dominant, as can be seen in Figure 54. In 2006, almost 60% of the films that were licensed in China were from the USA. It should be noted that the official quota for foreign films allowed to be on Chinese screens is tied to the amount of films that actually air each year. Currently, the policy allows for no more than one-third of all films screening at a given time throughout the country to be of foreign origin (either on a revenue sharing or flat fee basis) (UNESCO, 2007).

Figure 54: Overseas films licensed in China in 2006

Source: China Media Yearbook and Directory (2007).

Although Unesco (2007) mentions that the export of Chinese audiovisual content is successful in some areas (UNESCO, 2007), no data are provided.

DVDs

Import and export figures of DVDs also provide an indicator of the competitive strength of the European film sector. The import of DVDs (Table 45) in European countries in 2006 was mainly intra-EU27 (except for Malta and Slovenia). The UK (365,577,000 EUR), Germany (343,788,000 EUR) and France (182,992,000€) were the main importers.

The export of DVDs shows a more mixed view. Remarkably three of the smaller EU countries, Denmark (702,862,000 EUR), Austria (514,045,000 EUR) and the Netherlands (396,779,000 EUR), were the main exporters. The export of Belgium, Czech Republic, Estonia, Cyprus, Lithuania, the Netherlands, Austria, Poland and Slovakia was destined (almost) 100% intra-EU 27. The main extra-EU 27 exporters in terms of percentages are Bulgaria (55%), Romania (52%) Sweden (49%) and Denmark (49%).

Table 45: External trade in DVDs for each EU country in 1000 EUR (2006). Trade can include DVDs reproduced outside the countries of publication

	Import			Export		
	Total 1000EURs	Intra-EU 27 (%)	Extra-EU 27 (%)	Total 1000EURs	Intra-EU 27 (%)	Extra-EU 27 (%)
BE	160725	98	2	66116	98	2
BG	1415	96	4	3490	45	55
CZ	14334	96	4	31339	97	3
DK	56417	96	4	85122	51	49
DE	343778	91	9	702862	83	17
EE	2198	91	9	1191	100	0
IE	78453	99	1	8078	68	32
EL	8818	95	5	2038	82	18
ES	54316	97	3	16401	73	27
FR	182992	93	7	147332	77	23
IT	110429	98	2	16996	73	27
CY	4190	89	11	543	100	0
LV	1725	87	13	431	85	15
LT	1931	89	11	2269	100	0
LU	27149	82	18	34828	91	9
HU	6379	97	3	2859	67	33
MT	1816	33	67	29	87	13
NL	83726	79	21	396779	98	2
AT	122069	91	9	514045	96	4
PL	33271	96	4	133030	96	4
PT	11515	95	5	3170	94	6
RO	3165	96	4	1306	48	52
SI	3116	41	59	1676	53	47
SK	19244	99	1	8514	100	0
FI	36832	98	2	2105	81	19
SE	98773	76	24	80443	51	49
UK	365577	92	8	212355	87	13

Source: Eurostat.

Television market

USA content is also dominating the European television market, although its share has slightly decreased over the years compared to European domestic fiction. The proportion of European fiction broadcast by European TV channels was 39.1% in 2007, compared with 37.6% in 2006 and 36.1% in 2005, according to the European Audiovisual Observatory. In 2007, the share of European non-national fiction broadcast by European TV channels ranged from 0.5% (Luxemburg) to 41.6% (Switzerland) (European Audiovisual Observatory) (Table 46).

Table 46: Share of hours of European non-domestic fiction broadcast in a selection of countries (2007)

Country	Market share
Denmark	16,1%
Finland	41,0%
France	32,0%
Germany	22,8%
Italy	20,6%
Norway	24,3%
Spain	16,4%
Sweden	24,8%
Switzerland	41,6%
The Netherlands	31,1%
UK	12,3%

Source: European Audiovisual Observatory (2010).

6.2.2 The music industry

Table 47 provides an overview of the external trade of CDs in the EU27. European local music has an important market share within its country of origin (ranging from 30-50%). When local music does cross the border, its main export destination is within Europe. Intra-EU27 import ranges from 77% (Spain) to 99% (Slovakia) as compared to extra-EU27 import (Table 47). Export numbers are less straightforward, ranging from 0% intra-EU27 (Latvia) to 100% (Cyprus and Malta).

Denmark (225,422,000€), UK (184,153,000 EUR) and France (181,165,000 EUR) are the main importers. All countries mainly import CDs from within the EU27. Denmark is also the main exporter (339,699,000 EUR), followed by the Netherlands (218,583,000 EUR) and UK (150,828,000 EUR). Most countries mainly export within the EU27. Latvia (100%), Ireland (63%), Sweden (62%), Hungary (60%) and Slovenia (51%) mainly export to outside of the EU27.

Table 47: Intra and extra EU trade in CDs for each EU country, 2006 (x 1000 EUR)

	Import			Export		
	Total 1000EUs	Intra-EU 27 (%)	Extra-EU 27 (%)	Total 1000EUs	Intra-EU 27 (%)	Extra-EU 27 (%)
BE	54855	98	2	32911	95	5
BG	528	69	31	477	57	43
CZ	8584	96	4	29544	95	5
DK	15289	81	19	10671	76	24
DE	225422	92	8	339699	76	24
EE	3172	85	15	2252	58	42
IE	18335	98	2	5652	37	63
EL	8608	95	5	10343	92	8
ES	31737	92	8	19847	79	21
FR	181165	92	8	101321	74	26
IT	58193	95	5	9178	77	23
CY	1800	96	4	502	100	0
LV	1360	81	19	56	0	100
LT	909	89	11	1067	86	14
LU	9284	89	11	6230	94	6

	Import			Export		
	Total 1000EUs	Intra-EU 27 (%)	Extra-EU 27 (%)	Total 1000EUs	Intra-EU 27 (%)	Extra-EU 27 (%)
HU	2277	92	8	2212	40	60
MT	1152	99	1	185	100	0
NL	46983	68	32	218583	79	21
AT	68523	97	3	89234	92	8
PL	629	96	4	15112	91	9
PT	11804	89	11	1772	62	38
RO	2311	99	1	164	67	33
SI	4196	91	9	2189	49	51
SK	5576	99	1	1287	99	1
FI	15759	96	4	3380	92	8
SE	45373	77	23	49096	38	62
UK	184153	85	15	150828	72	28

Source: Eurostat.

In the music industry, the USA had the largest global market share (with 40% global market share in 2003), followed by Europe (32.5% in 2003) (IPTS, 2008). Five major record labels (BMG (became part of Sony Music in 2008), EMI, Sony, Universal and Warner) dominated the industry in 2004/2005 and had a combined market share of almost 66% in Europe in 2006, as shown in Figure 54 (KEA, 2006).

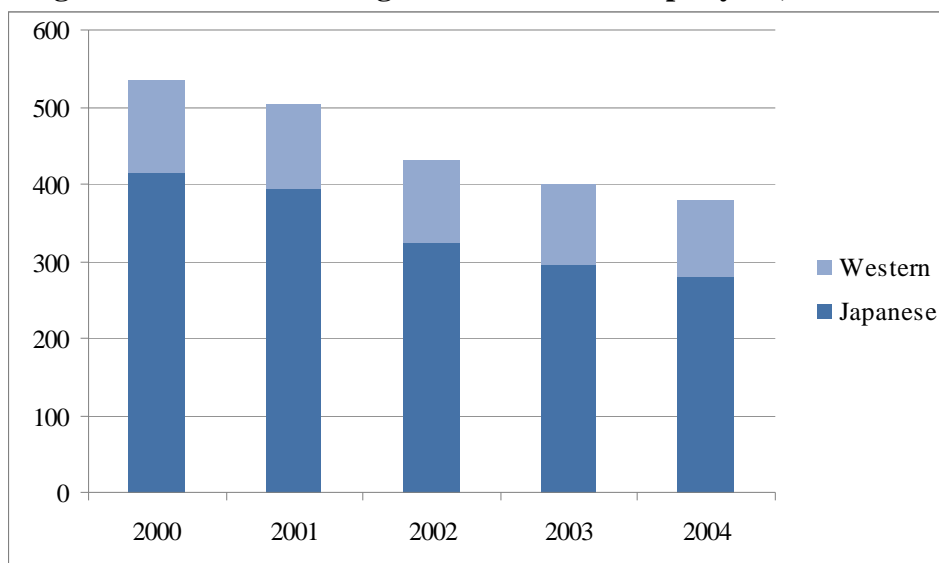
Table 48 shows the turnover of the majors and main independent music companies in Europe. As can be seen, there is a significant distance between the big five and the largest independent record companies in terms of turnover - Sanctuary Records, Europe's biggest independent record company, has a turnover of one tenth of BMG's. Also remarkable is the fact that three out of the big four belong to European media groups. This is a significant difference with the film industry that is dominated by the USA (Hollywood).

Table 49: Turnovers of major and main independent music companies in Europe.

Company	Date (account closed or year)	Nationality	Turnover (€m)
Universal Music Group	December 31 2004	FR/USA	4 989
Sony Music33	March 31 2005	JP/USA	3 144
EMI Group Plc	March 31 2005	UK	2 914
Warner Music Group	September 30 2004	USA	2 750
BMG34	December 31 2004	DE	2 547
Sanctuary Records Group	2004	UK	250
EDEL group	2005	DE	153
PIAS group	September 2005	BE	108
Wagram Music	2004	FR	46,3
Beggards Music	2004	UK	37,2

Source: KEA.

For the Asian market, data for the Japanese music market are provided. As can be seen in Figure 56, the sales for the audio recording have been declining in Japan. Most music that is sold is Japanese music, and although the largest part of audio recordings sold in 2004 is Japanese, domestic music is declining faster than imported music. According to JETRO, this is caused by market shrinkage, fewer hit songs and piracy (JETRO, 2005).

Figure 55: audio recording sales in billion Yen per year, 2000-2004

Source: JETRO.

6.2.3 The publishing industry

In this paragraph, the publishing industry is discussed by looking at three constituting subsectors: newspapers, books and magazines/periodicals. Contrary to the audiovisual and music industry, the position of European companies in the European publishing market is stronger than that of the USA. In most cases, the import and export of books, newspapers, periodicals and other materials is twice that of the USA, and European exports are higher than the imports. Table 50 shows the figures for 1994 and 2002 (KEA, 2006).

Table 50: Evolution of US and European trade in publishing, million US\$

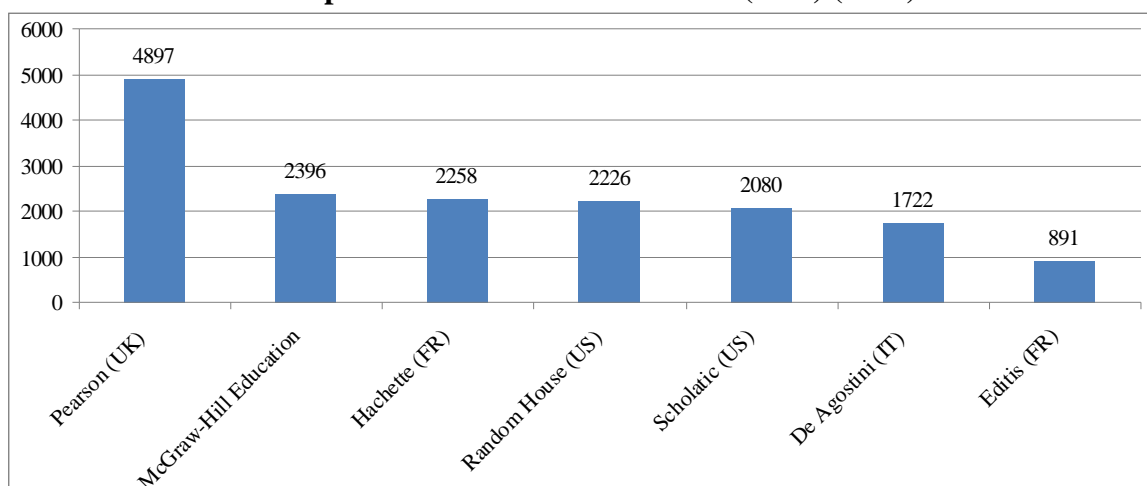
	Europe		North America	
	Exports	Imports	Exports	Imports
1994				
Value	\$8,517 million	\$7,233 million	\$ 3,394 million	\$3,527 million
Share	Books: 58.4% Newspapers and periodicals: 67,3% Other printed matter: 61,5%	Books: 47,3% Newspapers and periodicals: 57,3% Other printed matter: 50,1%	Books: 24,1% Newspapers and periodicals: 25,2% Other printed matter: 24%	Books: 25,2% Newspapers and periodicals: 22% Other printed matter: 26,5%
2002				
Value	\$ 10,897 million	\$ 9,474 million	\$ 4,013 million	\$ 4,999 million
Share	Books: 60,9% Newspapers and periodicals: 70,4% Other printed matter: 55,7%	Books: 45,2% Newspapers and periodicals: 62,7% Other printed matter: 46,9 %	Books: 21,4% Newspapers and periodicals: 23,7% Other printed matter: 33,9%	Books: 26,5% Newspapers and periodicals: 20,3% Other printed matter: 35,8%

Source: KEA, 2006, based on UNESCO's statistics.

Similar to the audiovisual and music industry, the European publishing industry is represented by a small number of very large players, of which some are world leaders in publishing as Figure 56 shows. Besides these large companies, there are many medium-sized and small companies. Within the publishing industry, the newspaper and magazine market is quite concentrated and dominated by large organizations, while the book market is characterised by many small, specialised publishers.

When considering the largest publishers in the world by turnover, four out of the first six are Europe-originating companies, with Pearson (UK) leading with a turnover of almost \$5 billion in 2005 (Figure 56).

Figure 56: World leading publishing companies by turnover, \$US million. Source European Federation of Publishers (FEP) (2006)



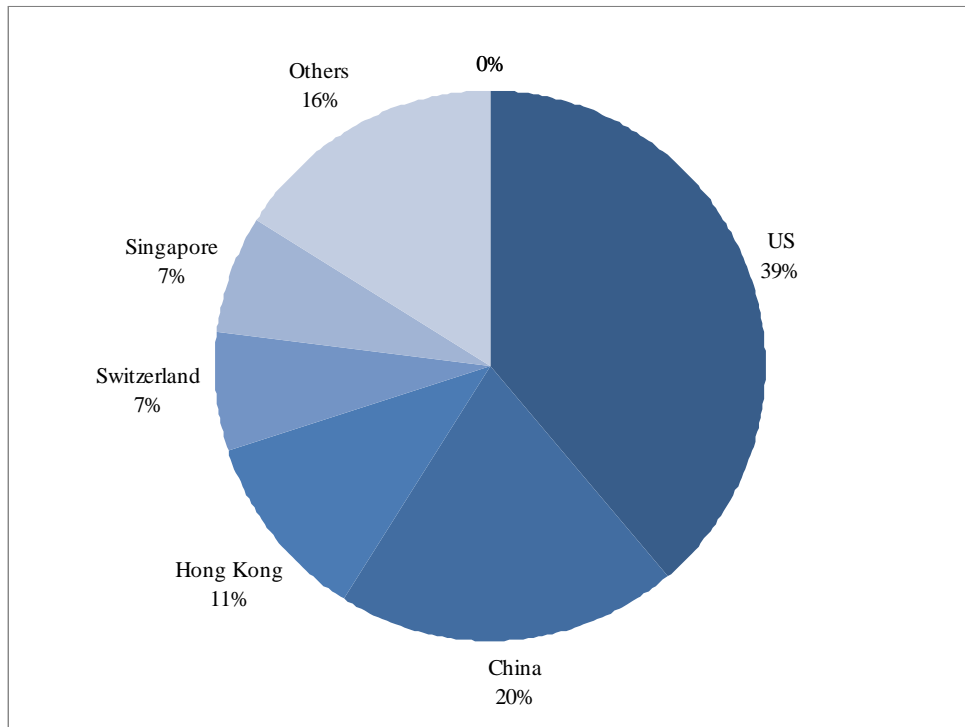
Source: KEA.

Some of the largest European publishers are part of larger media groups. Bertelsmann, the German organisation that controls the Random House group, is for example part of a group that is active in film, radio, television, music and printing, and Lagardère (France) is part of a group that is active in audiovisual, radio, television and new media (KEA, 2006).

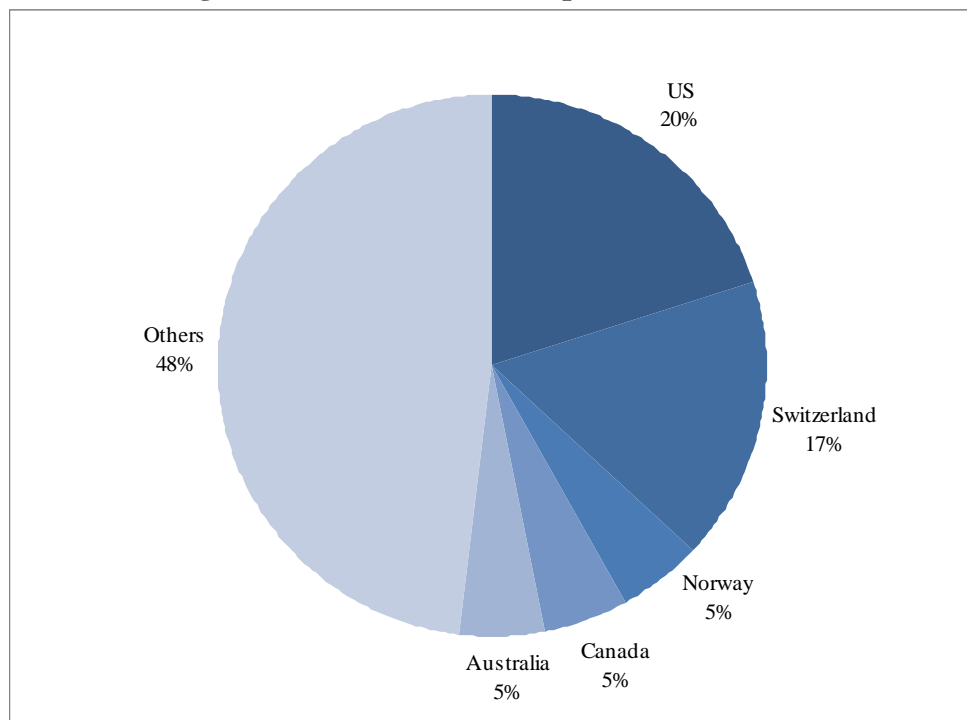
Books

Concerning the import and export of books, it can be said that the concentration of EU27 exports is relatively low for books in comparison to other cultural goods: the top three partners account for only 43% of book exports. The top eight countries receive 64% and the remaining 36% are spread across 193 countries (Eurostat, 2007).

Figure 57 shows the source of import of books within the EU 27 in 2006. In total, the import of books had a combined value of €1,710 million. Most imported books (39%) came from the US, with China in second place (20%), followed by Hong Kong (11%) and Switzerland (7%). The US is an important export destination: 20% of exported books were shipped to the US, followed by Switzerland that received 17% of the exported books from the EU 27 in 2006. In total, the value of the export of books was €2,654 million.

Figure 57: EU27 external trade in books, source of imports, 2006

Source: Eurostat 2007.

Figure 58: Destination for exported books, 2006

Source: Eurostat 2007.

According to the data of the Federation of European Publishers (FEP), the sales of books in domestic markets is growing, from 77.8% in 2006 to 84.4% in 2009 (Table 51). Within the EU 27, the focus in imports and exports is on intra-EU 27, with an exception for the UK, which mainly imports from outside of the EU 27 (71%) and mainly exports to outside of the EU 27 (54%) (Table 52). The most likely cause for this is the English language that allows for

easy exchange with English-speaking countries such as the US, Australia and Canada. Portugal, Romania and Sweden mainly import from within the EU27, but their export is focused on extra-EU27 destinations. This might be enabled by language opportunities (i.e. Brazil is a relevant export destination for Portugal).

Table 51: Percentage of book sales in the domestic market in Europe

	2009	2008	2007	2006
% Sales in domestic market	84,4%	83%	82,7%	77,8%

Source: FEP (2010).

Table 52: External trade in books for each EU country, 2006 (EUR 1000s). Trade can include books printed outside the country of origin

	Import			Export		
	Total 1000EUs	Intra- EU 27 (%)	Extra- EU 27 (%)	Total 1000EUs	Intra- EU 27 (%)	Extra- EU 27 (%)
BE	416592	90	10	341546	91	9
BG	11707	86	14	2492	74	26
CZ	124835	92	8	96786	92	8
DK	125819	82	18	98301	61	39
DE	528287	61	39	1321223	61	39
EE	8680	57	43	9819	95	5
IE	172535	89	11	159813	81	19
EL	81392	76	24	42585	72	28
ES	209907	63	37	598295	55	45
FR	666919	78	22	601682	49	51
IT	223483	78	22	480440	77	23
CY	18077	95	5	1095	72	28
LV	13831	68	32	7481	56	44
LT	11972	82	18	12788	79	21
LU	38156	91	9	12515	95	5
HU	69699	79	21	36127	81	19
MT	4924	89	11	8028	93	7
NL	325223	67	33	382539	83	17
AT	404337	98	2	72918	78	22
PL	97058	91	9	113177	85	15
PT	64041	86	14	28186	33	67
RO	25268	72	28	2601	46	54
SI	13386	79	21	70284	65	35
SK	30266	90	10	55681	86	14
FI	64466	85	15	39881	64	36
SE	146462	77	23	111042	38	62
UK	1256215	29	71	2015890	46	54

Source: Eurostat.

For newspapers, journals and periodicals, the import and export mainly happens within the EU27. Only Romania exports mainly to outside the EU27 (78% in 2008). Estonia and Sweden

(both 66%), and more strongly Slovenia (84%) and Malta (100%) export mainly to outside the EU27 (Table 53).

Table 53: External trade in newspapers, journals and periodicals for each EU country, 2006 (EUR 1000s)³⁰

	Import			Export		
	Total 1000EURs	Intra- EU 27 (%)	Extra- EU 27 (%)	Total 1000EURs	Intra- EU 27 (%)	Extra- EU 27 (%)
BE	288553	97	3	170786	99	1
BG	4938	96	4	1791	70	30
CZ	96797	100	0	112627	81	19
DK	44110	54	46	63219	71	29
DE	324398	88	12	852628	74	26
EE	2179	64	36	14956	34	66
IE	137699	100	0	25681	97	3
EL	17638	83	17	10599	96	4
ES	159572	98	2	139480	67	33
FR	424794	91	9	403967	73	27
IT	183161	97	3	185712	75	25
CY	30522	100	0	4237	100	0
LV	10859	69	31	2394	70	30
LT	1722	52	48	19398	17	83
LU	29539	100	0	10906	100	0
HU	32550	97	3	6934	83	17
MT	6870	97	3	180	0	100
NL	91564	79	21	125562	87	13
AT	179487	96	4	48551	90	10
PL	24529	91	9	165497	70	30
PT	93417	91	9	3702	43	57
RO	11356	93	78	519	70	30
SI	22421	72	28	18913	16	84
SK	20167	98	2	49128	64	36
FI	56693	95	5	123656	42	58
SE	87420	91	9	26069	34	66
UK	250666	73	27	625902	68	32

Source: Eurostat.

In the EU27 countries, the UK stands out as the main importer of books (1,256,215,000 EUR), followed by France (666,919,000 EUR) and Germany (528,287,000 EUR) in 2006 (Annex F). Most countries import mostly from within the EU27. Only the UK imported most

³⁰ Trade can include press printed outside the country of origin.

books from outside the EU27 in 2006 (71%). The UK was also the main exporter of books (2,015,890,000 EUR) in 2006, followed by Germany (1,321,223,000 EUR) and France (601,682,000 EUR). Most countries export to the EU27. Portugal (67%), Sweden (62%), the UK (54%), Romania (54%) and France (51%) exported mainly outside to EU27.

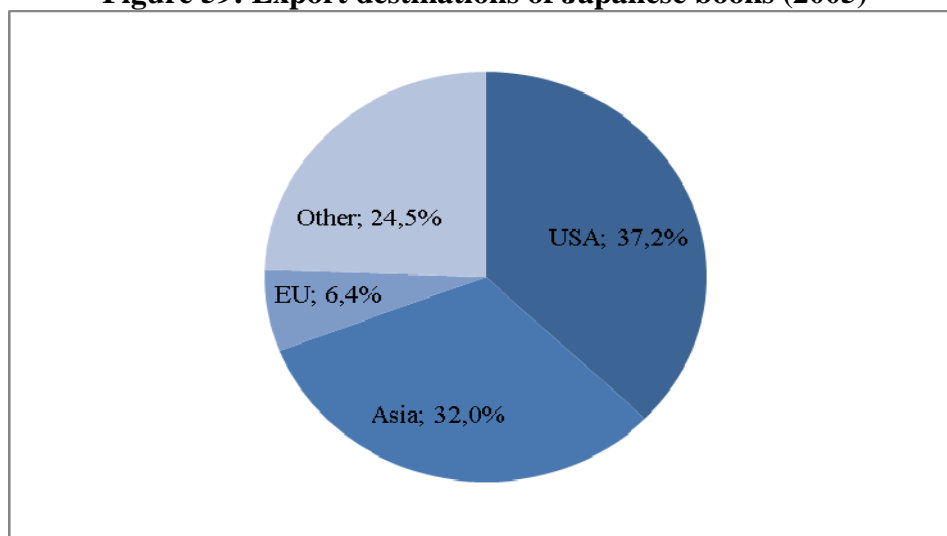
The Japanese external trade organization (JETRO) provides numbers for the import and export of books in billion Yens per year. As Table 54 shows, the import of books was rising until 2002, and quite strongly declined from 2003 on, back to the level of 2000 in 2005. Export numbers also declined, from 14.3 billion Yen in 2000 to 10.3 billion Yen in 2005.

Table 54: Import and export of books (billion Yen) 2000-2005

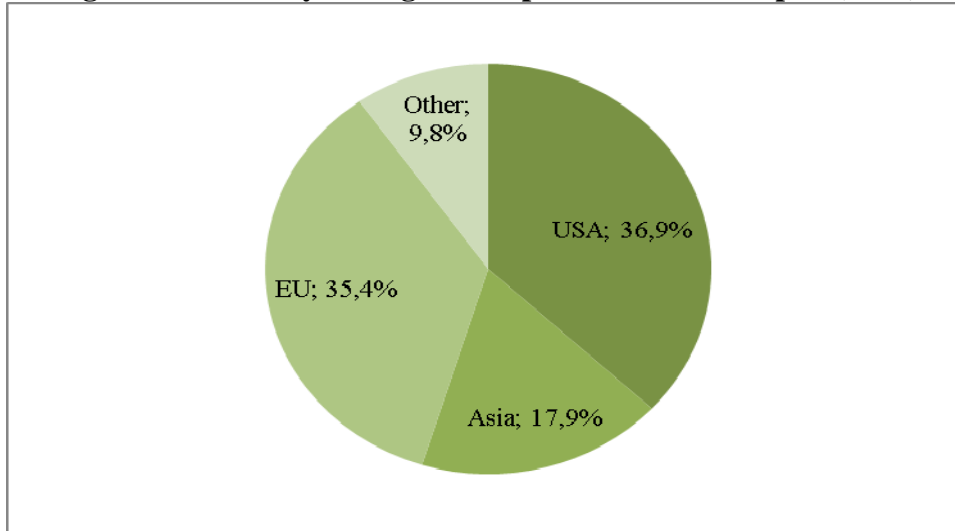
	Import	Export
2000	30,6	14,3
2001	36,8	13,8
2002	38,1	13,4
2003	37,2	12,8
2004	33,3	11,3
2005	30,7	10,3

Source: JETRO (2006).

Figure 59: Export destinations of Japanese books (2005)



Source: JETRO (2006).

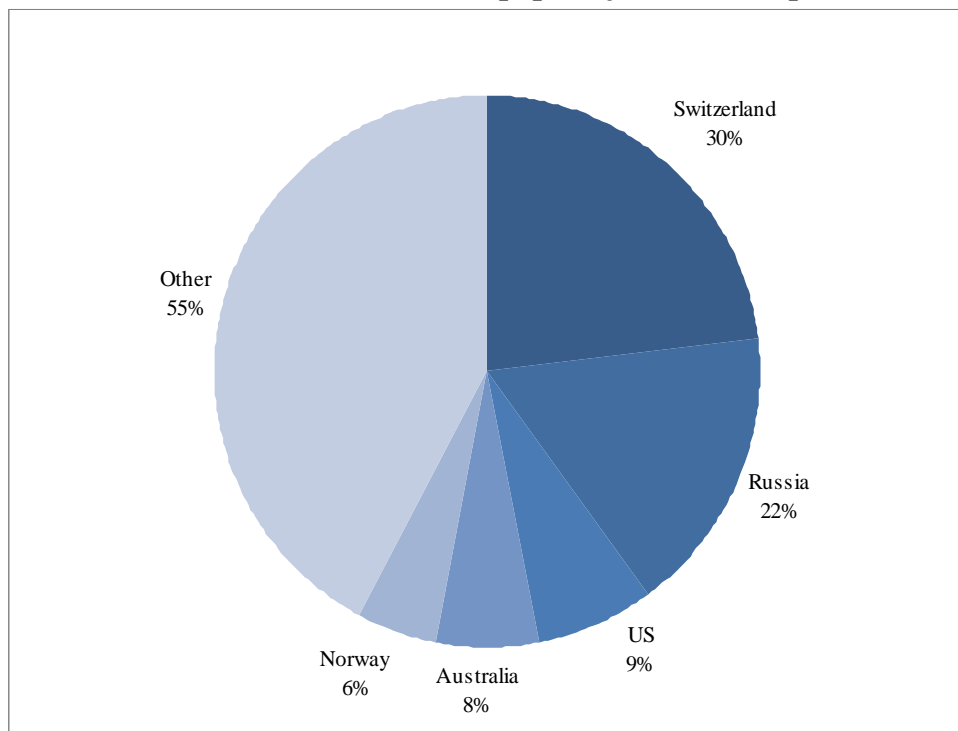
Figure 60: Country of origin of imported books in Japan (2005)

Source: JETRO (2006).

Newspapers and magazines

Concerning the import and export of books, the figures of Eurostat (2007) show that the US is EU's most important source of imported newspapers, journals and periodicals, with almost 60% of imported press coming from the US in 2006 (Figure 61). The second largest source of import is Switzerland, with 15%. The total value of import is 250 million EUR in 2006.

Switzerland is the main destination for exported press, and received 30% of exported press from the EU27 in 2006. Russia is second, with 22%, followed by the US with 9% (Figure 61). The total value of export is 896 million EUR in 2006.

Figure 61: EU 27 external trade in newspapers, journals and periodicals, 2006.

Source: Eurostat 2007.

As can be seen in Table 55, according to the Eurostat figures, France was the main importer of newspapers, journals and periodicals in EU27 in 2006 (424,794,000 EUR), followed by Germany (324,398,000 EUR) and Belgium (288,553,000,000 EUR). All countries imported mainly from within the EU27. Germany was the main exporter of newspapers, journals and periodicals (852,628,000 EUR), followed by the UK (625,902,000 EUR) and France (403,967,000 EUR). Most countries exported mainly within the EU27 in 2006, except for Malta (100% extra-EU), Slovenia (84%), Lithuania (83%), Estonia (66%), Sweden (66%), Finland (58%) and Portugal (57%).

Table 55: External trade in newspapers, journals and periodicals for each EU country, 2006 (EUR 1000s). Trade can include press printed outside the country of origin

	Import			Export		
	Total 1000EUs	Intra- EU 27 (%)	Extra- EU 27 (%)	Total 1000EUs	Intra- EU 27 (%)	Extra- EU 27 (%)
BE	288553	97	3	170786	99	1
BG	4938	96	4	1791	70	30
CZ	96797	100	0	112627	81	19
DK	44110	54	46	63219	71	29
DE	324398	88	12	852628	74	26
EE	2179	64	36	14956	34	66
IE	137699	100	0	25681	97	3
EL	17638	83	17	10599	96	4
ES	159572	98	2	139480	67	33
FR	424794	91	9	403967	73	27
IT	183161	97	3	185712	75	25
CY	30522	100	0	4237	100	0
LV	10859	69	31	2394	70	30
LT	1722	52	48	19398	17	83
LU	29539	100	0	10906	100	0
HU	32550	97	3	6934	83	17
MT	6870	97	3	180	0	100
NL	91564	79	21	125562	87	13
AT	179487	96	4	48551	90	10
PL	24529	91	9	165497	70	30
PT	93417	91	9	3702	43	57
RO	11356	93	78	519	70	30
SI	22421	72	28	18913	16	84
SK	20167	98	2	49128	64	36
FI	56693	95	5	123656	42	58
SE	87420	91	9	26069	34	66
UK	250666	73	27	625902	68	32

Source: Eurostat.

The Japan External Trade Organization (JETRO) provides data about the import and export of Japanese newspapers and magazines. As can be seen in Table 56, the export is quite stable over the years. The import of newspapers and magazines however is less stable, but keeps varying between 14.6 billion Yen (2004) and 19.1 billion Yen (2001).

**Table 56: Import and export of newspapers and magazines in Japan (in billion Yen),
2005**

	Import	Export
2000	16,5	4,4
2001	19,1	4,3
2002	15,9	4,3
2003	16,8	4,3
2004	14,6	4,5
2005	15,4	4,6

Source: JETRO (2006).

Appendices

A Detailed description of ISIC rev 3.1 categories

This annex describes in detail the categories that are included and excluded under ISIC rev 3.1.

221 Publishing

2211 Publishing of books, brochures and other publications

This class includes:

- publishing of books, brochures, leaflets and similar publications, including publishing of dictionaries and encyclopaedias,
- publishing of atlases, maps and charts,
- publishing of audio books,
- publishing of encyclopaedias etc. on CD-ROM.

This class excludes:

- exclusive publishing of these products online, see 7240.

2212 Publishing of newspapers, journals and periodicals

This class includes:

- publishing of newspapers, including advertising newspapers,
- publishing of periodicals, trade journals, comic books etc.

This class excludes:

- exclusive publishing of these products online, see 7240.

2213 Publishing of music

This class includes:

- publishing of gramophone records, compact discs and tapes with music or other sound,
- recordings,
- publishing of printed music.

This class also includes:

- publishing of other sound recordings.

This class excludes:

- publishing of software, see 7221,
- exclusive publishing of these products online, see 7240,

- publishing of motion pictures, videotapes and movies on digital video disc (DVD) or similar media production of master copies for records or audio material, see 9211.

2219 Other publishing

This class includes:

- publishing of:
 - photos, engravings and postcards
 - greeting cards
 - timetables
 - forms
 - posters, reproduction of works of art
 - other printed matter

92 Recreational, cultural and sporting activities

Category 92 includes a number of activities that, due to technological developments, have become relevant to MCI. Although these are not included in the OECD definition and therefore the definition that is used in this research, it is important to be aware of this.

This includes:

- the operation of facilities and provision of services to meet the cultural, entertainment, recreational and sports interest of their customers'
- the production and promotion of, and participation in, live performances, events or exhibits intended for public viewing,
- the provision of artistic, creative or technical skills for the production of artistic products and live performances,
- the preservation and exhibition of objects and sites of historical, cultural or educational interest and
- the operation of facilities and the provision of services that enable customers to participate in sports or recreational activities or pursue amusement, hobbies and leisure-time interests.

921 Motion picture, radio, television and other entertainment activities

9211 Motion picture and video production and distribution.

This class includes:

- production of theatrical and non-theatrical motion pictures whether on film, videotape or disc for direct projection in theatres or for broadcasting on television,
- production in a motion picture studio, or in special laboratories for animated films or cartoons, of full-length films, documentaries, shorts etc., for public entertainment, for advertising, education, training or news information,
- processing of motion picture film,
- publishing of motion picture film,
- supporting activities such as film editing, cutting, dubbing etc.,
- activities of sound-recording studios,

- distribution of motion pictures and videotapes to other industries but not to the general public, including sale or rental of movies or tapes to other industries, as well as activities allied to the distribution of films and videotapes such as film and tape booking, delivery, storage etc.,
- buying and selling of motion picture and video distribution rights.

This class excludes:

Film duplicating (except reproduction of motion picture film for theatrical distribution) as well as audio and video tape, CD or DVD reproduction from master copies, see 2230.

- retail trade of tapes, see groups 521, 523, 525
- wholesale of blank videotapes, see 5152
- wholesale of recorded videotapes, see 5139
- renting of tapes to the general public, see 7130
- film processing other than for the motion picture industry, see 7494
- activities of personal theatrical or artistic agents or agencies, see 7499
- activities of own account actors, cartoonists, directors, stage designers and technical specialists, see 9214

9212 Motion picture projection

This class includes:

- motion picture or videotape projection in cinemas, in the open air or in other projection facilities.

This class also includes:

- activities of cine-clubs.

9213 Radio and television activities

This class includes:

- production of radio and television programmes, whether live or taped, whether or not combined with broadcasting,
- broadcasting of radio and television programmes.

The programmes produced and broadcast may be for entertainment, promotion, education or training or news dissemination such as sports, weather etc. The production of programmes may result in a permanent tape which may be sold, rented or stored for broadcast or rebroadcast.

This class excludes:

- radio and television transmission via cable networks, see 6420,
- radio and television transmission by relay or satellite, see 6420,
- news agencies, see 9220.

922 News agency activities

9220 News agency activities

This class includes:

- news syndicate and news agency activities furnishing news, pictures and features to the media,
- activities of independent journalists.

B Internal and external EU trade

There are no data on internal and external EU trade for the individual economic sectors. A detailed commodity based database is available on UN COMTRADE statistics. <http://comtrade.un.org/db/default.aspx>. We will check to what extent this product-based database might provide additional information.

Table 57: Internal and external trade for EU countries, in mio. EUR

	2002		2007	
	<i>EU27</i>	<i>ExEU27</i>	<i>EU27</i>	<i>ExEU27</i>
Belgium	19.580	-739	27.345	-13.194
Germany	72.147	60.624	126.577	67.682
France	-10.504	13.102	-52.381	393
Italy	-256	8.094	6.721	-15.317
Luxembourg (Grand-Duché)	-1.605	-972	-335	-3.441
Netherlands	79.546	-53.326	133.624	-91.202
Denmark	2.621	4.966	561	3.076
Ireland	24.460	13.470	13.479	14.045
Greece	-11.895	-10.478	-20.996	-17.433
Spain	-21.364	-20.322	-48.212	-51.025
Austria	-4.552	4.947	-7.709	8.134
Portugal	-11.622	-3.446	-14.196	-5.271
Finland	3.892	7.664	-855	6.927
Sweden	114	15.267	-4.105	15.481
United Kingdom	-38.626	-50.080	-62.459	-71.657
Bulgaria	-1.089	-1.260	-4.559	-3.790
Czech Republic	3.703	-5.992	7.164	-4.005
Estonia	-523	-914	-3.352	-54
Cyprus	-1.984	-1.469	-3.600	-1.668
Latvia	-1.436	-426	-4.263	-854
Lithuania	-683	-1.739	-4.072	-1.231
Hungary	4.891	-8.315	6.518	-6.638
Malta	-891	237	-1.454	227
Poland	-5.461	-9.520	-7.953	-10.699
Romania	-2.042	-2.164	-15.314	-6.448
Slovenia	-1.450	838	-1.756	692
Slovakia	833	-3.116	4.056	-5.589
EU27	95.804	-45.069	68.474	-192.859
EU 6	158.908	26.783	241.551	-55.079
EU 9	-56.972	-38.012	-144.492	-97.723
EU15	101.936	-11.229	97.059	-152.802
EU new	-6.132	-33.840	-28.585	-40.057

Source: Eurostat.

C 2008 data for ISIC rev4 sectors

This table provides an overview of Eurostat statistics in ISIC rev4 format (Table 58). They display the revenues of the certain sectors, because the preferred variable, added value, is not available. The relation between revenues and values added is roughly given by the cost of intermediate goods and services (see also 3.5). Value added mostly lies between 40 and 70% of the revenues.

Table 58: Revenue in MCI sectors in EU27 (Million Euros, current prices)

	J Information and communication	J58 Publishing activities	J581 Publishing of books, periodicals and other publishing activities	J582 Software publishing	J59 Motion picture, video and television programme production, sound recording	J591 Motion picture, video and television programme activities	J592 Sound recording and music publishing activities	J60 Programming and broadcasting activities	J601 Radio broadcasting	J602 Television programming and broadcasting activities	J62 Computer programming, consultancy and related activities	J63 Information service activities	J631 Data processing, hosting and related activities; web portals	J639 Other information service activities
Austria	18,350	2,707	2,454	253	699	606	92	1,228	66	1,161	4,472	2,516	2344	172
Belgium	30,104	3,393	3,217	175	2,648	2,567	81	1,352	34	1,317	9,821	697	638	58
Bulgaria	3,340	241	234	7	94	87	7	229	16	213	654	109	60	49
Cyprus	1,078	91	75	16	31	29	2	195	22	173	141	25	15	10
Czech Republic	14,576	1,780	1,491	289	567	477	89	0	43	0	4,970	977	925	51
Denmark		3,560	2,842	718	0	0	0	0	30	0	8,090	0	0	0
Estonia	1,375	184	168	16	42	32	10	41	11	29	314	34	27	7
Finland	16,010	2,974	2,956	17	553	449	103	803	52	750	6,114	552	467	84
France		28,062	19,573	8,489	12,438	11,202	1,236	10,175	1,408	8,766	44,737	8,542	7,232	1,310
Germany		31,565	28,923	2,642	6,827	5,580	1,248	7,311	2,382	4,928	65,108	13,100	1,308	11,792
Greece	13,362	2,374	1,784	590	918	812	105	353	72	281	1,375	186	152	33
Hungary	11,675	1,301	1,038	263	697	632	65	480	41	438	3,140	1,203	1,065	138
Italy		12,324	11,980	344	5,025	4,744	280	10,578	660	9,917	28,941	12,541	12,313	228
Latvia	1,527	178	173	5	38	34	3	64	13	50	297	67	53	14
Lithuania	1,766	271	257	13	46	37	9	94	9	84	284	43	41	2
Luxembourg	6,165	492	158	334	0	104	0	170	0	0	1,266	661	0	0
Netherlands	52,540	7,980	7,980	0	2,839	2,287	551	1,654	1,016	637	20,054	0	0	164
Poland	28,117	4,331	3,501	829	1,416	1,096	320	2,914	312	2,601	5,194	1,004	779	
Portugal	13,777	1,453	1,257	196	666	607	59	592	72	520	2,936	345	255	89
Romania	9,766	1,050	693	356	371	327	44	586	93	493	2,010	228	180	47
Slovakia	4,557	419	318	100	111	100	10	142	1	141	1,362	280	270	9
Slovenia	3,127	391	388	2	150	132	18	58	33	25	906	106	97	9
Spain	84,974	9,284	8,357	927	5,906	5,667	239	6,236	880	5,356	22,219	1,807	1,560	246
Sweden	36,760	6,367	4,411	1,956	2,842	2,474	367	1,090	0	0	15,239	842	653	189
United Kingdom		26,221	24,360	1,862	18,221	17,069	1,153	10,172	1,326	8,846	85,002	9,578	6,518	3,061

Source: Eurostat.

D Key figures of major MCI companies in ISIC 62 and 63

Table 59 provides data on the revenues, profits and R&D investments of some of the largest firms in the software and computer business, and provides an impression of the size of major MCI related companies in non MCI sectors.

Table 59: Major companies; Revenues, profit and R&D investments, Million EUR

		Revenue	Profit	R&D investments	Year
Google	Total	21,795	4,320	2,793	2008
	Youtube	200	NA	NA	
Apple	Total	30,698	5,703	975	2009
	ITunes	1,900	570	NA	
Microsoft	Total	62,480	18,760	NA	2009-2010
	EDD ³¹	1,500	NA	NA	
Amazon	Total	14,840	476	662	2007

Source: company accounts 2008/2009/2010, in mio USD.

Table 60: Examples of companies in the statistical categories 221 and 92

221	PUBLISHING, PRINTING AND REPRODUCTION OF RECORDED MEDIA	
2211	Publishing of books, brochures and other publications	Feltrinelli, Cambridge university press, Simon & Schuster, 3i GROUP/H.I.G. Capital/Volnay B.V.
2212	Publishing of newspapers, journals and periodicals	Reed Elsevier, John Wiley & Sons, Metro, GRUNER + JAHR/Financial Times / JV
2213	Publishing of music	EMI, Sony, Polygram, BMG, Bertelsmann
2219	Other publishing	Hallmark, ABN-AMRO/ALLIANZ/SDU
64	POST AND TELECOMMUNICATIONS	
6420	Telecommunications	Media DTT, Tele 2
72	COMPUTER AND RELATED ACTIVITIES	
7221	Software publishing	Nokia, SAP, 2k games, 505 Games, Guerrilla Games
7230	Data processing	Microsoft, Yahoo, Lagardere
7240	Database activities and online distribution of electronic content	Youtube, spotify
92	RECREATIONAL, CULTURAL AND SPORTING ACTIVITIES	
9211	Motion picture and video production and distribution	Dreamworks, Cineplus filmproduktion, STUDIO CANAL
9213	Radio and television activities	RTL group, BBC
9220	News agency activities	Reuters, AFP, Mediaset
9231	Library and archives activities	

³¹ The Entertainment and Devices Division, which also includes the Zune division, online services, and mobile platforms.

E R&D expenditures

From the ANBERD/OECD database, we can extract the R&D expenditures as share of GDP in the relevant ISIC rev. 3.1 sectors and as percentage of the total economy.

Table 61: Yearly R&D expenditures as percentage of GDP in printing and publishing, NACE 22

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Belgium	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,0	0,0	0,0	0,0	0,0
Germany	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,3	0,5	0,3	0,3
France	0,1	0,0	0,1	0,0	0,0	0,0	0,0	0,1	0,1	0,0	0,1	0,1
Italy	0,1	0,0	0,1	0,1	0,1	0,0	0,1	0,1	0,1	0,0	0,1	0,8
Luxembourg (Grand-Duché)	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Netherlands	0,2	0,2	0,2	0,2	0,3	0,2	0,2	0,5	0,2	0,5	0,2	0,7
Denmark	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,4	1,6	2,3	0,2	0,9
Ireland	0,3	0,4	0,3	0,3	0,2	0,1	0,1	0,0	0,0	0,0	0,0	0,0
Greece	1,3	1,2	1,3	0,8	0,5	0,4	0,3	0,1	0,1	0,2	0,6	0,0
Spain	0,2	0,3	0,2	0,2	0,2	0,3	0,2	0,4	0,5	0,5	0,3	0,4
Austria	0,0	0,0	0,1	0,3	0,1	0,4	0,4	0,3	0,5	0,8	1,0	1,1
Portugal	0,0	0,2	0,4	0,2	0,1	0,1	0,1	0,0	0,0	0,1	0,3	0,0
Finland	0,4	0,4	0,4	0,3	0,1	0,2	0,6	0,6	0,4	0,3	0,2	0,2
Sweden	0,2	0,3	0,4	0,3	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,4
United Kingdom	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Bulgaria	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Czech Republic	0,0	0,2	0,0	0,1	0,0	0,1	0,1	0,2	0,2	0,1	0,2	0,2
Estonia	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Cyprus	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Latvia	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Lithuania	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Hungary	0,0	0,0	0,1	0,1	0,5	0,3	0,1	0,1	0,1	0,3	0,5	0,9
Malta	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Poland	0,0	0,0	0,0	0,0	0,0	0,1	0,1	0,0	0,2	0,2	0,2	0,3
Romania	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Slovenia	0,0	0,0	0,1	0,2	0,4	0,4	0,5	0,2	0,5	0,5	0,1	0,4
Slovakia	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

Source: OECD/ANBERD database.

Table 62: Yearly R&D expenditures as percentage of GDP in total Economy

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Belgium	1.67	1.77	1.83	1.86	1.94	1.97	2.07	1.94	1.88	1.86	1.83	1.86
Germany	2.19	2.19	2.24	2.27	2.4	2.45	2.46	2.49	2.52	2.49	2.49	2.53
France	2.29	2.27	2.19	2.14	2.16	2.15	2.2	2.23	2.17	2.15	2.1	2.1
Italy	0.97	0.99	1.03	1.05	1.02	1.05	1.09	1.13	1.11	1.1	1.09	1.13
Luxembourg (Grand-Duché)						1.65			1.65	1.63	1.56	1.65
Netherlands	1.97	1.98	1.99	1.9	1.96	1.82	1.8	1.72	1.76	1.81	1.79	1.78
Denmark	1.82	1.84	1.92	2.04	2.18	2.24	2.39	2.51	2.58	2.48	2.46	2.48
Ireland	1.26	1.3	1.27	1.24	1.18	1.12	1.1	1.1	1.17	1.23	1.25	1.25
Greece	0.43		0.45		0.6		0.58		0.57	0.55	0.59	0.58
Spain	0.79	0.81	0.8	0.87	0.86	0.91	0.91	0.99	1.05	1.06	1.12	1.2
Austria	1.55	1.6	1.7	1.78	1.9	1.94	2.07	2.14	2.26	2.26	2.45	2.47
Portugal	0.54	0.57	0.59	0.65	0.71	0.76	0.8	0.76	0.74	0.77	0.81	1.02
Finland	2.26	2.53	2.71	2.88	3.17	3.35	3.32	3.37	3.44	3.45	3.48	3.48
Sweden	3.26		3.48		3.61		4.17		3.85	3.62	3.6	3.74
United Kingdom	1.91	1.83	1.77	1.76	1.82	1.81	1.79	1.79	1.75	1.68	1.73	1.75
Bulgaria	0.62	0.52	0.51	0.57	0.57	0.52	0.47	0.49	0.5	0.5	0.49	0.48
Czech Republic	0.95	0.97	1.08	1.15	1.14	1.21	1.2	1.2	1.25	1.25	1.41	1.55
Estonia				0.57	0.68	0.6	0.7	0.72	0.77	0.85	0.93	1.14
Cyprus				0.22	0.23	0.24	0.25	0.3	0.35	0.37	0.4	0.43
Latvia	0.47	0.42	0.38	0.4	0.36	0.44	0.41	0.42	0.38	0.42	0.56	0.7
Lithuania	0.43	0.49	0.54	0.54	0.5	0.59	0.67	0.66	0.67	0.75	0.75	0.79
Hungary	0.72	0.63	0.7	0.66	0.67	0.79	0.92	1	0.93	0.87	0.94	1
Malta								0.26	0.26	0.53	0.57	0.61
Poland	0.63	0.65	0.65	0.67	0.69	0.64	0.62	0.56	0.54	0.56	0.57	0.56
Romania				0.49	0.4	0.37	0.39	0.38	0.39	0.39	0.41	0.45
Slovenia	1.53	1.29	1.28	1.34	1.37	1.39	1.5	1.47	1.27	1.4	1.44	1.56
Slovakia	0.92	0.91	1.08	0.78	0.66	0.65	0.63	0.57	0.57	0.51	0.51	0.49

Source: OECD/ANBERD database.

F Statistical tables of EU Member States

Employment

Table 63: Employment in the media and content industries (2211, 2212, 2213, 2214, 2215, 6420, 72, 92), average annual growth rate 1995-2007, concentration index 1995 and change 1995-2007

	<i>Number of working persons</i>	<i>Annual average growth rate employment</i>	<i>Concentration index (EU27 = 100)</i>	
	2007 <i>x 1000</i>	1995-07 <i>%</i>	1995	95-07
Belgium	286.9	2.9	91	8
Germany	2844.9	1.6	109	0
France	1786.0	2.4	103	3
Italy	1670.1	3.2	91	10
Luxembourg (Grand-Duché)	16.1	5.6	68	6
Netherlands	620.4	3.3	102	8
Denmark	241.1	1.7	130	-4
Ireland	156.7	4.5	124	-12
Greece	220.8	2.1	72	-1
Spain	1193.4	5.1	84	4
Austria	275.7	1.7	108	-5
Portugal	225.6	0.4	82	-15
Finland	213.7	3.1	126	5
Sweden	404.1	1.4	144	-8
United Kingdom	2578.3	1.4	135	-11
Bulgaria	166.6	4.0	51	17
Czech Republic	286.1	1.3	82	1
Estonia	46.0	2.6	92	17
Cyprus	24.2	3.9	90	6
Latvia	69.8	1.8	100	-6
Lithuania	88.2	2.0	81	6
Hungary	272.8	2.7	95	4
Malta	9.5	2.0	94	-3
Poland	724.1	2.0	67	5
Romania	338.3	1.0	69	-14
Slovenia	58.9	2.6	82	11
Slovakia	114.5	1.3	80	-1
EU27	14932.7	2.2	100	0
EU 6	7224.4	2.3	102	4
EU 9	5509.4	2.2	115	-8
EU15	12733.7	2.3	107	-1
EU new	2199.0	2.0	73	2

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Table 64: Employment in the Publishing of books, newspapers, journals/periodicals, sound recordings, other publishing (2211, 2212, 2213, 2214, 2215), average annual growth rate 1995-2007, concentration index 1995 and change 1995-2007

	<i>Number of working persons</i>	<i>Annual average growth rate employment</i>	<i>Concentration index (EU27 = 100)</i>	
	2007 <i>x 1000</i>	1995-07 %	1995	95-07
Belgium	11.3	0.7	70	-1
Germany	193.1	0.4	126	4
France	97.1	1.1	97	5
Italy	45.5	-0.9	60	-12
Luxembourg (Grand-Duché)	1.3	-1.1	175	-72
Netherlands	36.5	0.5	124	-10
Denmark	24.2	-2.8	333	-110
Ireland	5.3	3.0	74	-8
Greece	15.4	1.7	78	9
Spain	58.4	3.6	72	4
Austria	9.8	2.4	52	12
Portugal	12.1	1.4	58	5
Finland	16.0	-0.8	223	-50
Sweden	28.8	-0.7	196	-25
United Kingdom	169.7	0.7	144	0
Bulgaria	6.9	4.0	32	18
Czech Republic	15.9	1.7	65	16
Estonia	3.5	1.4	121	26
Cyprus	0.9	3.0	52	7
Latvia	5.6	1.3	127	7
Lithuania	6.8	0.0	118	1
Hungary	13.6	6.5	45	42
Malta	0.8	-0.1	143	-15
Poland	41.4	3.0	51	22
Romania	17.1	1.4	49	0
Slovenia	3.6	0.2	100	1
Slovakia	4.7	-1.8	72	-14
EU27	845.1	0.8	100	0
EU 6	384.8	0.4	101	-2
EU 9	339.7	0.7	126	-9
EU15	724.5	0.6	111	-4
EU new	120.6	2.2	58	15

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Table 65: Employment in publishing of books (2211), average annual growth rate 1995-2007, concentration index 1995 and change 1995-2007

	<i>Number of working persons</i>	<i>Annual average growth rate employment</i>	<i>Concentration index (EU27 = 100)</i>	
	2007 <i>x 1000</i>	1995-07 %	1995	95-07
Belgium	3.3	-0.7	99	-13
Germany	34.2	0.1	95	2
France	27.0	3.1	87	32
Italy	14.9	-2.5	97	-30
Luxembourg (Grand-Duché)	0.2	2.9	60	-2
Netherlands	10.0	2.9	105	26
Denmark	4.2	1.1	148	14
Ireland	0.5	3.7	29	0
Greece	3.7	5.0	52	36
Spain	20.3	1.7	129	-18
Austria	2.2	0.3	62	-1
Portugal	3.3	-0.2	79	-6
Finland	2.3	-1.0	135	-29
Sweden	4.7	-0.1	121	-4
United Kingdom	29.7	-1.2	129	-23
Bulgaria	1.3	-1.4	48	-7
Czech Republic	8.0	71.9	0	173
Estonia	0.8	2.8	98	46
Cyprus	0.0	0.0	9	-2
Latvia	1.0	3.0	80	25
Lithuania	1.7	-7.8	319	-195
Hungary	4.2	6.7	56	57
Malta	0.1	0.7	59	1
Poland	16.7	0.6	111	13
Romania	5.1	-2.1	92	-30
Slovenia	1.2	-1.0	155	-15
Slovakia	0.3	-13.4	93	-76
EU27	201.1	0.6	100	0
EU 6	89.7	0.6	94	3
EU 9	70.9	0.1	115	-13
EU15	160.5	0.4	103	-3
EU new	40.6	1.3	89	13

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Table 66: Employment in Publishing of newspapers (2212), average annual growth rate 1995-2007, concentration index 1995 and change 1995-2007

	<i>Number of working persons</i>	<i>Annual average growth rate employment</i>	<i>Concentration index (EU27 = 100)</i>	
	2007 <i>x 1000</i>	1995-07 %	1995	95-07
Belgium	3.6	0.2	51	11
Germany	77.1	-3.8	180	-34
France	30.1	-0.1	74	13
Italy	12.5	-1.3	37	0
Luxembourg (Grand-Duché)	0.9	-2.2	308	-100
Netherlands	12.7	-3.2	144	-34
Denmark	10.6	-6.0	472	-198
Ireland	2.8	0.1	120	-20
Greece	7.3	-0.5	104	12
Spain	22.6	3.7	60	22
Austria	3.7	1.0	51	18
Portugal	4.1	0.6	46	13
Finland	7.8	-3.5	321	-85
Sweden	15.3	-2.6	281	-27
United Kingdom	51.6	0.9	92	31
Bulgaria	3.1	15.8	8	54
Czech Republic	4.6	5.4	26	40
Estonia	1.3	-1.8	137	11
Cyprus	0.5	1.7	84	23
Latvia	1.4	-6.8	182	-90
Lithuania	2.4	2.1	71	48
Hungary	3.2	-1.3	58	1
Malta	0.6	-0.1	241	39
Poland	12.8	2.8	34	29
Romania	6.9	-0.7	55	0
Slovenia	1.5	0.0	93	27
Slovakia	1.1	-1.5	35	3
EU27	302.3	-1.4	100	0
EU 6	136.9	-2.7	113	-14
EU 9	125.9	-0.5	116	5
EU15	262.8	-1.7	114	-6
EU new	39.5	1.2	46	21

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Table 67: Employment in Publishing of journals and periodicals (2213), average annual growth rate 1995-2007, concentration index 1995 and change 1995-2007

	<i>Number of working persons</i>	<i>Annual average growth rate employment</i>	<i>Concentration index(EU27 = 100)</i>	
	2007 <i>x 1000</i>	1995-07 <i>%</i>	1995	95-07
Belgium	3.5	4.7	60	8
Germany	71.1	9.6	72	78
France	33.0	1.2	145	-37
Italy	14.3	0.9	68	-20
Luxembourg (Grand-Duché)	0.2	2.7	64	-22
Netherlands	12.1	4.4	115	3
Denmark	7.8	2.4	254	-30
Ireland	1.7	14.0	31	35
Greece	3.5	4.6	56	6
Spain	10.1	5.9	43	-2
Austria	3.3	7.0	47	22
Portugal	3.9	3.7	65	0
Finland	4.8	5.9	134	29
Sweden	6.7	5.1	102	23
United Kingdom	64.2	0.7	243	-72
Bulgaria	2.0	3.4	43	2
Czech Republic	2.2	-11.2	201	-166
Estonia	1.2	11.6	56	95
Cyprus	0.3	7.8	41	16
Latvia	2.9	12.7	82	139
Lithuania	2.0	26.1	10	100
Hungary	4.7	32.8	5	90
Malta	0.0	-1.2	45	-20
Poland	7.2	12.0	14	26
Romania	4.2	24.2	5	33
Slovenia	0.5	7.8	27	20
Slovakia	1.8	0.8	91	-20
EU27	269.3	3.7	100	0
EU 6	134.2	5.0	92	17
EU 9	106.0	2.1	148	-34
EU15	240.3	3.6	115	-4
EU new	29.0	5.2	44	11

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Table 68: Employment in Publishing of sound recordings (2214), average annual growth rate 1995-2007, concentration index 1995 and change 1995-2007

	<i>Number of working persons</i>	<i>Annual average growth rate employment</i>	<i>Concentration index (EU27 = 100)</i>	
	2007 <i>x 1000</i>	1995-07 %	1995	95-07
Belgium	0.3	-5.3	163	-100
Germany	4.4	26.0	9	111
France	4.1	-1.8	285	-115
Italy	1.7	-1.7	122	-50
Luxembourg (Grand-Duché)	0.0	2.6	66	-17
Netherlands	1.0	1.9	141	-17
Denmark	0.4	6.4	97	57
Ireland	0.0	-1.1	24	-13
Greece	0.3	3.0	61	3
Spain	0.8	4.4	44	-3
Austria	0.3	1.2	87	-12
Portugal	0.1	-5.0	59	-36
Finland	0.5	8.3	112	90
Sweden	1.3	2.3	315	2
United Kingdom	3.2	2.6	109	1
Bulgaria	0.1	-18.7	264	-247
Czech Republic	0.1	-11.9	158	-130
Estonia	0.0	8.8	11	14
Cyprus	0.0	0	0	0
Latvia	0.1	4.2	64	12
Lithuania	0.1	2.6	74	8
Hungary	0.4	28.3	8	105
Malta	0.0	0	0	-1
Poland	1.3	22.4	10	83
Romania	0.4	20.9	7	37
Slovenia	0.1	7.2	82	68
Slovakia	0.0	-13.6	88	-76
EU27	21.0	2.6	100	0
EU 6	11.4	2.3	119	-1
EU 9	6.9	2.9	98	-3
EU15	18.3	2.6	111	-2
EU new	2.7	3.1	58	7

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Table 69: Employment in Other Publishing, average annual growth rate 1995-2007, concentration index 1995 and change 1995-2007

	<i>Number of working persons</i>	<i>Annual average growth rate employment</i>	<i>Concentration index (EU27 = 100)</i>	
	2007 <i>x 1000</i>	1995-07 <i>%</i>	1995	95-07
Belgium	0.6	-2.1	125	-62
Germany	6.2	5.6	51	17
France	2.9	2.9	55	-5
Italy	2.1	4.3	34	2
Luxembourg (Grand-Duché)	0.0	0.9	25	-12
Netherlands	0.7	3.5	40	-3
Denmark	1.1	-3.1	383	-210
Ireland	0.2	1.3	84	-40
Greece	0.6	1.3	73	-18
Spain	4.7	11.9	53	46
Austria	0.2	2.8	28	-2
Portugal	0.7	8.2	34	23
Finland	0.6	0.1	178	-69
Sweden	0.8	-1.0	133	-54
United Kingdom	21.0	3.6	295	0
Bulgaria	0.5	10.5	24	31
Czech Republic	1.0	0.9	100	-19
Estonia	0.3	-5.4	464	-291
Cyprus	0.0	0.9	37	-14
Latvia	0.1	4.1	56	2
Lithuania	0.6	9.9	74	89
Hungary	1.0	6.4	78	27
Malta	0.0	-0.2	138	-52
Poland	3.3	2.4	101	-5
Romania	0.5	33.5	1	23
Slovenia	0.2	-4.3	249	-145
Slovakia	1.4	4.3	240	42
EU27	51.4	3.7	100	0
EU 6	12.5	4.0	50	3
EU 9	30.0	3.8	181	-11
EU15	42.5	3.8	103	0
EU new	8.9	3.3	87	0

Source: Eurostat. Structural Business Statistics/National Accounts/TNO.

Table 70: Employment in telecommunications (6420), average annual growth rate 1995-2007, concentration index 1995 and change 1995-2007

	<i>Number of working persons</i>	<i>Annual average growth rate employment</i>	<i>Concentration index (EU27 = 100)</i>	
	2007 <i>x 1000</i>	1995-07 %	1995	95-07
Belgium	33.0	1.1	108	40
Germany	198.3	1.3	66	33
France	136.4	-2.1	113	-9
Italy	103.5	0.7	63	18
Luxembourg (Grand-Duché)	1.3	10.3	27	50
Netherlands	41.9	-3.8	136	-40
Denmark	17.4	1.1	85	33
Ireland	14.2	0.9	145	-13
Greece	23.2	-2.4	109	-12
Spain	60.2	-3.1	95	-37
Austria	18.4	-8.9	227	-137
Portugal	14.6	-3.7	73	-17
Finland	15.4	-0.8	120	2
Sweden	31.9	0.5	105	34
United Kingdom	216.7	-0.8	125	10
Bulgaria	23.9	-2.3	131	-4
Czech Republic	19.8	-6.1	120	-45
Estonia	3.5	7.1	35	72
Cyprus	3.0	3.3	101	55
Latvia	5.2	-3.9	125	-34
Lithuania	7.3	-2.5	97	-4
Hungary	18.7	-1.9	95	-6
Malta	0.0	0	0	0
Poland	75.4	-1.3	87	11
Romania	51.9	-3.3	149	-39
Slovenia	5.3	-3.2	123	-15
Slovakia	9.5	-6.1	140	-54
EU27	1149.8	-1.4	100	0
EU 6	514.4	-0.4	84	14
EU 9	411.9	-1.8	117	-13
EU15	926.4	-1.0	97	3
EU new	223.4	-2.8	111	-12

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Table 71: Employment in Computer and related activities (72), average annual growth rate 1995-2007, concentration index 1995 and change 1995-2007

	<i>Number of working persons</i>	<i>Annual average growth rate employment</i>	<i>Concentration index (EU27 = 100)</i>	
	2007 <i>x 1000</i>	1995-07 %	1995	95-07
Belgium	60.3	8.2	80	24
Germany	444.2	4.0	97	-13
France	409.5	6.5	111	9
Italy	374.9	5.7	116	-5
Luxembourg (Grand-Duché)	6.7	11.4	111	39
Netherlands	152.9	8.9	101	33
Denmark	55.6	4.4	166	-22
Ireland	36.9	16.6	60	71
Greece	23.2	11.8	19	18
Spain	236.8	11.3	64	23
Austria	49.0	10.3	55	37
Portugal	40.2	23.2	10	50
Finland	43.6	8.9	100	32
Sweden	114.1	3.9	230	-40
United Kingdom	598.8	2.2	216	-73
Bulgaria	20.2	10.6	22	18
Czech Republic	61.3	5.7	81	7
Estonia	6.9	15.6	25	56
Cyprus	2.2	10.8	28	14
Latvia	7.9	14.5	21	32
Lithuania	9.0	14.7	15	29
Hungary	59.8	19.1	27	81
Malta	2.4	10.0	72	41
Poland	107.1	12.5	23	30
Romania	59.6	16.6	16	32
Slovenia	10.6	13.8	32	50
Slovakia	18.5	17.8	16	48
EU27	3012.1	5.9	100	0
EU 6	1448.4	5.7	105	0
EU 9	1198.3	4.9	139	-24
EU15	2646.7	5.3	119	-9
EU new	365.4	12.2	29	32

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Table 72: Employment in Recreational, cultural and sporting activities (92), average annual growth rate 1995-2007, concentration index 1995 and change 1995-2007

	<i>Number of working persons</i>	<i>Annual average growth rate employment</i>	<i>Concentration index (EU27 = 100)</i>	
	2007 <i>x 1000</i>	1995-07 %	1995	95-07
Belgium	182.3	2.2	93	3
Germany	2009.3	1.3	117	-1
France	1143.0	2.1	100	2
Italy	1146.2	3.0	94	10
Luxembourg (Grand-Duché)	6.9	3.3	55	-8
Netherlands	389.0	3.3	94	10
Denmark	143.9	2.0	110	3
Ireland	100.3	3.1	138	-30
Greece	159.1	2.2	75	2
Spain	838.0	5.0	88	5
Austria	198.5	2.5	104	8
Portugal	158.7	-0.9	100	-29
Finland	138.6	2.9	122	5
Sweden	229.2	0.8	129	-13
United Kingdom	1593.2	1.6	120	-5
Bulgaria	115.6	5.3	45	26
Czech Republic	189.0	1.6	77	5
Estonia	32.1	1.1	112	2
Cyprus	18.1	3.5	103	4
Latvia	51.1	1.7	109	-4
Lithuania	65.2	2.1	88	10
Hungary	180.7	1.0	113	-14
Malta	6.4	0.5	110	-18
Poland	500.3	1.3	74	2
Romania	209.8	0.4	67	-16
Slovenia	39.4	2.4	83	11
Slovakia	81.8	1.4	83	2
EU27	9925.7	2.0	100	0
EU 6	4876.7	2.0	104	3
EU 9	3559.5	2.2	109	-4
EU15	8436.2	2.1	106	0
EU new	1489.5	1.5	77	-1

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Value added

Table 73: Value added in the media and content industries (2211, 2212, 2213, 2214, 2215, 6420, 72, 92), value added as share of total value added national economy and average annual growth rate 1995-2007 (in constant prices 2000)

	<i>Value added</i>	<i>Value added as share in total national economy</i>	<i>Annual average growth rate value added</i>
	2007	2007	1995-2007
	<i>x million Euro</i>	<i>%</i>	<i>%</i>
Belgium	13567	5.3	5.1
Germany	116808	5.8	3.8
France	89635	6.1	6.2
Italy	59958	5.2	5.3
Luxembourg (Grand-Duché)	1475	5.5	7.5
Netherlands	27353	6.4	4.3
Denmark	12327	7.5	5.1
Ireland	7810	5.8	5.0
Greece	8269	5.2	5.5
Spain	38891	5.4	6.6
Austria	10200	4.7	2.4
Portugal	6010	5.4	4.0
Finland	9065	6.3	5.7
Sweden	15418	6.0	6.1
United Kingdom	144555	9.5	6.8
Bulgaria	1450	8.8	7.6
Czech Republic	5847	6.1	8.4
Estonia	749	8.1	7.3
Cyprus	705	6.2	6.1
Latvia	863	7.9	0.1
Lithuania	850	4.2	1.3
Hungary	4179	7.1	3.4
Malta	369	9.5	6.9
Poland	9720	4.3	9.8
Romania	1823	5.6	6.5
Slovenia	1222	5.6	5.5
Slovakia	2127	5.6	11.3
EU27	591244	6.3	5.5
EU 6	308795	5.8	4.8
EU 9	252546	7.4	6.2
EU15	561341	6.4	5.4
EU new	29903	5.5	7.0

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Table 74: Value added in the Publishing of books, newspapers, journals/periodicals, sound recordings, other publishing (2211, 2212, 2213, 2214, 2215), value added as share of total value added national economy and average annual growth rate 1995-2007 (in constant prices 2000)

	<i>Value added</i>	<i>Value added as share in total national economy</i>	<i>Annual average growth rate value added</i>
	2007	2007	1995-2007
	<i>x million Euro</i>	<i>%</i>	<i>%</i>
Belgium	856	0.3	1.4
Germany	9573	0.5	-1.4
France	5351	0.4	-0.1
Italy	3411	0.3	1.4
Luxembourg (Grand-Duché)	66	0.2	0.8
Netherlands	2519	0.6	0.3
Denmark	985	0.6	-0.5
Ireland	420	0.3	4.9
Greece	700	0.4	2.7
Spain	2833	0.4	2.7
Austria	664	0.3	4.4
Portugal	352	0.3	-0.2
Finland	1000	0.7	1.4
Sweden	1313	0.5	-0.1
United Kingdom	10952	0.7	0.7
Bulgaria	46	0.3	-2.0
Czech Republic	298	0.3	2.7
Estonia	44	0.5	6.6
Cyprus	28	0.2	4.7
Latvia	42	0.4	-0.6
Lithuania	53	0.3	-0.5
Hungary	226	0.4	10.4
Malta	21	0.5	1.7
Poland	979	0.4	1.1
Romania	44	0.1	-13.2
Slovenia	90	0.4	-3.5
Slovakia	93	0.2	14.3
EU27	42956	0.5	0.3
EU 6	21776	0.4	-0.4
EU 9	19219	0.6	1.1
EU15	40995	0.5	0.3
EU new	1961	0.4	1.0

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Table 75: Value added in publishing of books (2211), value added as share of total value added national economy and average annual growth rate 1995-2007 (in constant prices 2000)

	<i>Value added</i>	<i>Value added as share in total national economy</i>	<i>Annual average growth rate value added</i>
	2007	2007	1995-2007
	<i>x million Euro</i>	<i>%</i>	<i>%</i>
Belgium	350	17.7	1.3
Germany	2610	14.7	2.8
France	1132	12.2	-0.4
Italy	1291	17.0	2.3
Luxembourg (Grand-Duché)	11	2.7	-4.8
Netherlands	733	17.4	1.9
Denmark	229	14.5	1.8
Ireland	33	1.1	12.9
Greece	230	15.4	15.9
Spain	924	15.9	0.0
Austria	128	7.5	2.5
Portugal	110	13.8	-2.5
Finland	131	8.0	-0.5
Sweden	262	11.5	-0.9
United Kingdom	1983	10.7	-1.4
Bulgaria	10	8.9	4.3
Czech Republic	130	18.7	18.7
Estonia	9	9.9	7.9
Cyprus	1	1.2	2.8
Latvia	10	12.3	2.4
Lithuania	18	16.5	-7.0
Hungary	68	15.2	24.1
Malta	1	1.5	-2.0
Poland	374	19.4	-2.4
Romania	18	14.2	30.2
Slovenia	25	12.4	-6.5
Slovakia	5	2.9	5.8
EU27	10826	13.2	0.8
EU 6	6127	14.9	1.8
EU 9	4030	10.9	-0.3
EU15	10157	13.0	0.9
EU new	668	16.4	0.4

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Table 76: Value added in Publishing of newspapers (2212), value added as share of total value added national economy and average annual growth rate 1995-2007 (in constant prices 2000)

	<i>Value added</i>	<i>Value added as share in</i>	<i>Annual average growth rate</i>
	2007	<i>total national economy</i>	<i>value added</i>
	<i>x million Euro</i>	2007	1995-2007
		%	%
Belgium	252	12.7	1.1
Germany	4412	24.9	-2.8
France	1652	17.9	-0.6
Italy	1045	13.8	0.2
Luxembourg (Grand-Duché)	49	11.3	2.6
Netherlands	720	17.1	-3.2
Denmark	361	22.9	-2.9
Ireland	269	8.7	3.8
Greece	244	16.3	-2.9
Spain	1238	21.3	3.2
Austria	290	17.0	4.2
Portugal	114	14.3	-1.7
Finland	512	31.3	-0.5
Sweden	658	28.9	-1.0
United Kingdom	3373	18.2	-0.4
Bulgaria	24	21.5	-3.6
Czech Republic	102	14.7	-2.9
Estonia	22	24.7	24.4
Cyprus	20	29.8	4.5
Latvia	12	14.4	-7.8
Lithuania	19	17.9	6.7
Hungary	69	15.4	5.2
Malta	15	27.3	1.4
Poland	352	18.2	2.4
Romania	13	10.2	-17.2
Slovenia	43	21.0	-3.7
Slovakia	16	9.4	3.3
EU27	15898	19.3	-1.1
EU 6	8129	19.7	-2.0
EU 9	7062	19.1	0.1
EU15	15191	19.4	-1.1
EU new	706	17.3	-0.5

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Table 77: Value added in Publishing of journals and periodicals (2213), value added as share of total value added national economy and average annual growth rate 1995-2007 (in constant prices 2000)

	<i>Value added</i>	<i>Value added as share in</i>	<i>Annual average growth rate</i>
	2007	2007	1995-2007
	<i>x million Euro</i>	<i>%</i>	<i>%</i>
Belgium	226	11.4	2.1
Germany	2108	11.9	-3.3
France	2176	23.5	1.2
Italy	885	11.7	1.8
Luxembourg (Grand-Duché)	6	1.3	3.1
Netherlands	1004	23.9	3.2
Denmark	331	21.0	1.7
Ireland	108	3.5	8.6
Greece	168	11.2	3.2
Spain	490	8.4	7.2
Austria	221	12.9	6.5
Portugal	101	12.6	3.6
Finland	300	18.3	7.3
Sweden	301	13.2	4.0
United Kingdom	4636	25.0	2.1
Bulgaria	12	10.2	5.2
Czech Republic	53	7.6	0.5
Estonia	10	11.3	1.2
Cyprus	6	9.7	8.6
Latvia	18	21.5	16.7
Lithuania	13	12.0	13.8
Hungary	76	17.0	10.5
Malta	0	0.0	
Poland	205	10.6	12.0
Romania	11	9.1	3.7
Slovenia	12	5.8	6.7
Slovakia	58	33.7	26.3
EU27	13534	16.5	1.3
EU 6	6405	15.6	-0.3
EU 9	6655	18.0	2.8
EU15	13060	16.7	1.2
EU new	474	11.6	9.2

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Table 78: Value added in Publishing of sound recordings (2214), value added as share of total value added national economy and average annual growth rate 1995-2007 (in constant prices 2000)

	<i>Value added</i>	<i>Value added as share in</i>	<i>Annual average growth rate</i>
	2007	2007	1995-2007
	<i>x million Euro</i>	<i>%</i>	<i>%</i>
Belgium	8	0.4	2.4
Germany	179	1.0	14.8
France	257	2.8	-4.8
Italy	55	0.7	-5.1
Luxembourg (Grand-Duché)	0	0.1	0
Netherlands	34	0.8	-5.0
Denmark	16	1.0	9.0
Ireland	1	0.0	-8.0
Greece	16	1.0	15.6
Spain	28	0.5	-3.0
Austria	14	0.8	-1.0
Portugal	14	1.7	20.3
Finland	28	1.7	11.7
Sweden	53	2.3	-0.1
United Kingdom	208	1.1	-0.6
Bulgaria	0	0.1	-20.6
Czech Republic	2	0.3	8.1
Estonia	1	0.8	-6.9
Cyprus	0	0.0	0
Latvia	1	0.8	-5.5
Lithuania	0	0.1	-9.5
Hungary	5	1.2	15.9
Malta	4	7.6	5.8
Poland	13	0.7	11.3
Romania	1	1.0	-1.3
Slovenia	4	2.0	6.7
Slovakia	0	0.2	0
EU27	943	1.1	-0.8
EU 6	533	1.3	-1.8
EU 9	379	1.0	0.5
EU15	911	1.2	-0.9
EU new	32	0.8	5.6

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Table 79: Value added in Other Publishing (2215), value added as share of total value added national economy and average annual growth rate 1995-2007 (in constant prices 2000)

	<i>Value added</i>	<i>Value added as share in</i>	<i>Annual average growth rate</i>
	2007	2007	1995-2007
	<i>x million Euro</i>	<i>%</i>	<i>%</i>
Belgium	20	1.0	-1.1
Germany	263	1.5	5.8
France	135	1.5	3.6
Italy	136	1.8	7.7
Luxembourg (Grand-Duché)	0	0.0	-2.6
Netherlands	27	0.6	0.1
Denmark	47	3.0	-3.8
Ireland	9	0.3	-2.8
Greece	41	2.7	18.9
Spain	152	2.6	16.6
Austria	12	0.7	4.3
Portugal	13	1.6	10.4
Finland	29	1.8	-0.6
Sweden	39	1.7	-1.9
United Kingdom	752	4.1	6.1
Bulgaria	0	0.2	-23.1
Czech Republic	11	1.6	12.1
Estonia	2	2.3	-6.9
Cyprus	0	0.7	-7.0
Latvia	1	1.1	-3.8
Lithuania	3	3.1	1.5
Hungary	8	1.8	10.2
Malta	1	1.5	-2.0
Poland	35	1.8	-0.4
Romania	1	1.0	-31.0
Slovenia	5	2.6	-0.5
Slovakia	13	7.4	20.4
EU27	1757	2.1	4.1
EU 6	582	1.4	4.9
EU 9	1094	3.0	5.5
EU15	1676	2.1	5.3
EU new	81	2.0	-6.3

Source: Eurostat, Structural Business Statistics/National Accounts/TNO

Table 80: Value added in telecommunications (6420), value added as share of total value added national economy and average annual growth rate 1995-2007 (in constant prices 2000)

	<i>Value added</i>	<i>Value added as share in</i>	<i>Annual average growth rate</i>
	2007	2007	1995-2007
	<i>x million Euro</i>	<i>%</i>	<i>%</i>
Belgium	5986	2.3	5.6
Germany	39783	2.0	10.8
France	30485	2.1	6.9
Italy	25234	2.2	7.1
Luxembourg (Grand-Duché)	779	2.9	10.8
Netherlands	10756	2.5	5.3
Denmark	3987	2.4	9.2
Ireland	2303	1.7	9.3
Greece	3850	2.4	0.1
Spain	18432	2.6	11.9
Austria	3529	1.6	-0.3
Portugal	3038	2.7	4.1
Finland	2609	1.8	7.3
Sweden	5762	2.2	9.3
United Kingdom	39592	2.6	8.2
Bulgaria	833	5.1	6.3
Czech Republic	2075	2.2	5.3
Estonia	403	4.3	4.8
Cyprus	370	3.3	5.9
Latvia	431	3.9	-1.2
Lithuania	442	2.2	-2.9
Hungary	2045	3.5	3.2
Malta	0	0.0	0
Poland	3689	1.6	15.4
Romania	943	2.9	10.3
Slovenia	435	2.0	10.6
Slovakia	807	2.1	8.8
EU27	208596	2.2	7.6
EU 6	113022	2.1	7.9
EU 9	83102	2.4	7.5
EU15	196124	2.2	7.7
EU new	12472	2.3	6.5

Source: Eurostat. Structural Business Statistics/National Accounts/TNO.

Table 81: Value added in Computer and related activities (72), value added as share of total value added national economy and average annual growth rate 1995-2007 (in constant prices 2000)

	<i>Value added</i>	<i>Value added as share in</i>	<i>Annual average growth rate</i>
	2007	2007	1995-2007
	<i>x million Euro</i>	<i>%</i>	<i>%</i>
Belgium	3889	1.5	9.2
Germany	31458	1.6	3.2
France	23599	1.6	7.2
Italy	15751	1.4	7.0
Luxembourg (Grand-Duché)	383	1.4	12.5
Netherlands	8316	2.0	5.2
Denmark	3962	2.4	7.7
Ireland	2619	1.9	22.1
Greece	761	0.5	16.4
Spain	8501	1.2	11.5
Austria	2740	1.3	8.8
Portugal	1151	1.0	26.0
Finland	2947	2.0	10.6
Sweden	7032	2.7	10.2
United Kingdom	50535	3.3	6.3
Bulgaria	153	0.9	20.1
Czech Republic	1689	1.8	15.5
Estonia	106	1.1	17.6
Cyprus	83	0.7	11.2
Latvia	97	0.9	14.4
Lithuania	116	0.6	24.2
Hungary	748	1.3	10.7
Malta	47	1.2	10.8
Poland	1813	0.8	14.4
Romania	261	0.8	22.1
Slovenia	269	1.2	15.1
Slovakia	444	1.2	20.2
EU27	169471	1.8	6.6
EU 6	83397	1.6	5.3
EU 9	80247	2.3	7.8
EU15	163644	1.9	6.4
EU new	5827	1.1	14.9

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Table 82: Value added in Recreational, cultural and sporting activities (92), value added as share of total value added national economy and average annual growth rate 1995-2007 (in constant prices 2000)

	<i>Value added</i>	<i>Value added as share in total national economy</i>	<i>Annual average growth rate value added</i>
	2007	2007	1995-2007
	<i>x million Euro</i>	<i>%</i>	<i>%</i>
Belgium	2836	1.1	1.7
Germany	35994	1.8	1.5
France	30200	2.1	6.5
Italy	15562	1.4	2.5
Luxembourg (Grand-Duché)	247	0.9	0.4
Netherlands	5763	1.4	3.6
Denmark	3394	2.1	1.9
Ireland	2468	1.8	-1.9
Greece	2957	1.8	
Spain	9125	1.3	0.2
Austria	3268	1.5	1.9
Portugal	1469	1.3	0.2
Finland	2508	1.7	2.8
Sweden	1312	0.5	-3.8
United Kingdom	43476	2.9	8.7
Bulgaria	418	2.6	10.8
Czech Republic	1784	1.8	9.8
Estonia	196	2.1	11.2
Cyprus	225	2.0	5.2
Latvia	293	2.7	-0.1
Lithuania	239	1.2	17.8
Hungary	1161	2.0	0.4
Malta	301	7.7	6.9
Poland	3239	1.4	7.9
Romania	575	1.8	5.5
Slovenia	428	2.0	2.2
Slovakia	782	2.0	10.8
EU27	170221	1.8	4.1
EU 6	90601	1.7	3.2
EU 9	69978	2.0	5.1
EU15	160579	1.8	4.0
EU new	9642	1.8	6.4

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Number of Enterprises

Table 83: Number of enterprises in the media and content industries (2211, 2212, 2213, 2214, 2215, 6420, 72, except 92), number of enterprises, average annual growth rate 1995-2007, and average size 2007 and change average change 1995-2007

Total MDI	<i>Number of Enterprises</i>	<i>Annual average growth rate</i>	<i>Average Size (EU27 = 100)</i>	
	2007 <i>Absolute</i>	1995-07 <i>%</i>	2007	95-07
Belgium	17806	9.1	16.1	-16.2
Germany	61304	4.0	46.4	-15.0
France	82093	7.9	21.8	-19.1
Italy	102408	5.9	16.3	-5.8
Luxembourg (Grand-Duché)	1316	9.4	12.3	-6.5
Netherlands	25270	6.3	24.5	-10.1
Denmark	9847	3.7	24.5	-6.1
Ireland	5464	17.7	28.7	-90.5
Greece	10191	7.6	21.7	-19.2
Spain	41475	8.0	28.8	-11.4
Austria	13654	11.5	20.2	-40.8
Portugal	14538	21.5	15.5	-137.0
Finland	7383	5.1	28.9	-7.6
Sweden	40015	8.9	10.1	-13.6
United Kingdom	123510	5.1	20.9	-11.1
Bulgaria	5400	6.4	30.8	-10.0
Czech Republic	28586	6.1	10.0	-7.3
Estonia	1753	9.7	26.2	-32.1
Cyprus	361	6.1	66.9	-19.4
Latvia	2138	13.6	32.6	-88.6
Lithuania	2699	12.3	32.7	-70.5
Hungary	28200	5.5	9.7	-3.7
Malta	696	3.0	13.7	-1.7
Poland	45350	8.9	16.0	-19.0
Romania	18789	16.8	18.0	-85.3
Slovenia	3727	7.7	15.8	-12.4
Slovakia	2559	10.5	44.7	-81.7
EU27	696532	6.8	21.4	-14.7
EU 6	290197	6.1	24.9	-13.7
EU 9	266077	6.9	20.7	-14.7
EU15	556274	6.5	22.9	-14.3
EU new	140258	8.0	15.7	-15.8

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Table 84: Number of enterprises in the Publishing of books, newspapers, journals/periodicals, sound recordings, other publishing (2211, 2212, 2213, 2214, 2215), number of enterprises, average annual growth rate 1995-2007, and average size 2007 and change average change 1995-2007

	<i>Number of Enterprises 2007 Absolute</i>	<i>Annual average growth rate 1995-07 %</i>	<i>Average Size (EU27 = 100) 2007</i>	<i>95-07</i>
Belgium	1311	1.5	8.6	-0.9
Germany	5998	-0.8	32.2	4.4
France	14809	2.9	6.6	-1.5
Italy	7252	1.5	6.3	-2.1
Luxembourg (Grand-Duché)	99	2.6	13.0	-7.0
Netherlands	3000	2.4	12.2	-2.9
Denmark	1246	-2.7	19.4	-0.1
Ireland	200	10.5	26.3	-35.1
Greece	3335	3.7	4.6	-1.2
Spain	7741	9.6	7.5	-7.2
Austria	1134	9.9	8.6	-11.6
Portugal	1663	8.1	7.3	-8.3
Finland	1508	0.8	10.6	-2.3
Sweden	6223	7.4	4.6	-7.2
United Kingdom	9709	0.8	17.5	-0.3
Bulgaria	768	8.6	9.0	-6.1
Czech Republic	3918	7.1	4.1	-3.5
Estonia	287	2.2	12.2	-1.2
Cyprus	61	-3.7	14.0	7.8
Latvia	381	3.2	14.6	-3.7
Lithuania	592	3.4	11.5	-5.6
Hungary	3167	2.3	4.3	1.6
Malta	98	0.1	7.7	-0.2
Poland	5622	2.4	7.4	0.5
Romania	2370	9.3	7.2	-10.6
Slovenia	504	2.6	7.2	-2.3
Slovakia	476	3.8	9.9	-9.3
EU27	83472	3.0	10.1	-3.1
EU 6	32469	1.7	11.9	-1.9
EU 9	32759	4.0	10.4	-4.9
EU15	65228	2.8	11.1	-3.3
EU new	18244	4.1	6.6	-1.6

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Table 85: Number of enterprises in publishing of books (2211), number of enterprises, average annual growth rate 1995-2007, and average size 2007 and change average change 1995-2007

	<i>Number of Enterprises</i>	<i>Annual average growth rate</i>	<i>Average Size (EU27 = 100)</i>	
	2007 <i>Absolute</i>	1995-07 <i>%</i>	2007	95-07
Belgium	406	4.1	8.2	-6.3
Germany	2077	-2.8	16.5	4.8
France	3586	0.6	7.5	1.9
Italy	3237	1.6	4.6	-2.9
Luxembourg (Grand-Duché)	24	1.5	7.2	1.1
Netherlands	1300	1.5	7.7	1.1
Denmark	490	-3.1	8.6	3.4
Ireland	38	7.4	14.2	-7.5
Greece	1538	3.6	2.4	0.4
Spain	3973	8.6	5.1	-6.2
Austria	374	8.6	5.9	-9.4
Portugal	481	8.1	6.9	-11.0
Finland	340	-1.0	6.9	0.0
Sweden	1864	8.1	2.5	-3.9
United Kingdom	2756	-0.4	10.8	-1.1
Bulgaria	272	13.3	4.9	-21.1
Czech Republic	2897	23.9	2.8	2.7
Estonia	136	7.9	6.1	-4.8
Cyprus	8	-12.6	3.3	2.6
Latvia	124	2.4	8.4	0.5
Lithuania	215	-2.2	7.8	-8.1
Hungary	1363	14.3	3.1	-3.9
Malta	36	0.2	2.3	0.1
Poland	2882	0.4	5.8	0.2
Romania	1140	4.8	4.5	-5.7
Slovenia	170	8.5	7.0	-14.1
Slovakia	86	13.1	3.9	-90.3
EU27	31813	3.0	6.3	-2.1
EU 6	10630	0.3	8.4	0.3
EU 9	11854	3.8	6.0	-3.3
EU15	22484	2.0	7.1	-1.5
EU new	9329	6.2	4.3	-3.3

Source: Eurostat. Structural Business Statistics/National Accounts/TNO.

Table 86: Number of enterprises in Publishing of newspapers (2212), number of enterprises, average annual growth rate 1995-2007, and average size 2007 and change average change 1995-2007

	<i>Number of Enterprises</i>	<i>Annual average growth rate</i>	<i>Average Size (EU27 = 100)</i>	
	2007 <i>Absolute</i>	1995-07 <i>%</i>	2007	95-07
Belgium	156	-3.6	23.1	8.5
Germany	740	-2.3	104.2	-19.9
France	1711	1.0	17.6	-2.4
Italy	565	3.5	22.1	-17.1
Luxembourg (Grand-Duché)	11	6.8	83.9	-156.1
Netherlands	305	2.2	41.7	-37.8
Denmark	48	0.9	221.8	-299.3
Ireland	58	8.5	48.9	-79.0
Greece	570	0.6	12.8	-1.9
Spain	1345	10.9	16.8	-20.9
Austria	147	7.0	25.5	-25.8
Portugal	356	7.6	11.4	-14.1
Finland	253	-3.4	30.8	-0.2
Sweden	494	3.4	31.0	-32.6
United Kingdom	489	-3.5	105.6	43.8
Bulgaria	143	11.6	21.5	7.7
Czech Republic	59	-5.5	78.3	57.3
Estonia	20	-9.6	63.3	39.9
Cyprus	7	-5.6	78.0	46.0
Latvia	29	-9.8	47.2	15.3
Lithuania	112	29.6	21.8	-360.1
Hungary	140	-8.0	23.2	13.3
Malta	8	-1.8	74.5	14.1
Poland	688	4.6	18.6	-4.1
Romania	455	33.9	15.1	-533.5
Slovenia	63	3.6	24.5	-13.1
Slovakia	34	-0.2	32.5	-5.9
EU27	9006	1.8	33.6	-15.9
EU 6	3488	0.3	39.3	-17.4
EU 9	3760	2.9	33.5	-16.9
EU15	7248	1.6	36.3	-17.6
EU new	1758	3.0	22.5	-5.3

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Table 87: Number of enterprises in Publishing of journals and periodicals (2213), number of enterprises, average annual growth rate 1995-2007, and average size 2007 and change average change 1995-2007

	<i>Number of Enterprises</i>	<i>Annual average growth rate</i>	<i>Average Size (EU27 = 100)</i>	
	2007 <i>Absolute</i>	1995-07 %	2007	95-07
Belgium	253	0.6	13.9	5.3
Germany	1315	-4.0	54.1	43.0
France	4542	1.8	7.3	-0.6
Italy	2020	-0.5	7.1	1.1
Luxembourg (Grand-Duché)	42	2.3	4.0	0.2
Netherlands	855	1.7	14.1	3.8
Denmark	307	-0.5	25.3	7.4
Ireland	81	14.5	20.4	-1.0
Greece	830	8.1	4.2	-2.0
Spain	807	4.7	12.6	1.6
Austria	351	11.4	9.5	-6.0
Portugal	508	6.1	7.8	-2.5
Finland	288	4.4	16.7	2.6
Sweden	834	4.4	8.0	0.7
United Kingdom	2337	-0.2	27.5	2.6
Bulgaria	208	4.9	9.5	-1.8
Czech Republic	337	-7.2	6.5	-4.5
Estonia	83	13.1	13.9	-2.4
Cyprus	39	1.1	6.7	3.6
Latvia	156	10.3	18.8	4.3
Lithuania	150	8.6	13.3	11.1
Hungary	1057	-1.0	4.5	4.3
Malta	25	-1.5	1.9	0.1
Poland	866	10.3	8.4	1.4
Romania	414	20.1	10.1	3.4
Slovenia	117	2.5	4.6	2.1
Slovakia	153	-1.6	12.0	3.0
EU27	18975	1.2	14.2	3.6
EU 6	9027	0.1	14.9	6.5
EU 9	6343	2.8	16.7	-1.6
EU15	15370	1.1	15.6	3.9
EU new	3605	1.8	8.1	2.6

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Table 88: Number of enterprises in Publishing of sound recordings (2214), number of enterprises, average annual growth rate 1995-2007, and average size 2007 and change average change 1995-2007

	<i>Number of Enterprises 2007</i>	<i>Annual average growth rate 1995-07</i>	<i>Average Size (EU27 = 100)</i>	
	<i>Absolute</i>	<i>%</i>	<i>2007</i>	<i>95-07</i>
Belgium	214	2.6	1.2	-1.9
Germany	863	15.1	5.1	3.4
France	3660	8.9	1.1	-2.7
Italy	803	4.6	2.1	-2.3
Luxembourg (Grand-Duché)	11	3.8	1.4	-0.2
Netherlands	465	11.2	2.1	-3.9
Denmark	160	4.3	2.6	0.6
Ireland	5	14.4	4.2	-19.8
Greece	85	2.3	3.3	0.3
Spain	200	10.3	3.9	-3.6
Austria	174	17.9	1.6	-8.6
Portugal	146	16.9	0.8	-8.6
Finland	480	3.1	1.0	0.4
Sweden	2436	11.7	0.5	-1.0
United Kingdom	1205	4.9	2.7	-0.8
Bulgaria	19	-3.8	3.2	-20.6
Czech Republic	125	-8.0	1.1	-0.7
Estonia	1	-10.9	15.0	13.6
Cyprus	0	0	0	0
Latvia	24	10.3	3.3	-3.3
Lithuania	19	9.5	6.1	-7.1
Hungary	207	-1.3	2.1	2.0
Malta	0	0	0	0
Poland	268	8.3	4.9	3.8
Romania	191	18.5	2.0	0.4
Slovenia	57	4.9	2.4	0.5
Slovakia	15	-6.3	1.7	-2.7
EU27	11833	7.5	1.8	-1.3
EU 6	6016	8.6	1.9	-2.0
EU 9	4891	8.1	1.4	-1.1
EU15	10907	8.4	1.7	-1.6
EU new	926	1.0	2.9	0.6

Source: Eurostat. Structural Business Statistics/National Accounts/TNO.

Table 89: Number of enterprises in Other Publishing (2215), number of enterprises, average annual growth rate 1995-2007, and average size 2007 and change average change 1995-2007

	<i>Number of Enterprises</i>	<i>Annual average growth rate</i>	<i>Average Size (EU27 = 100)</i>	
	2007 <i>Absolute</i>	1995-07 <i>%</i>	2007	95-07
Belgium	282	2.2	2.2	-1.5
Germany	1003	7.9	6.2	-1.8
France	1310	5.0	2.2	-0.6
Italy	627	4.1	3.3	0.1
Luxembourg (Grand-Duché)	11	1.7	0.9	-0.1
Netherlands	75	-3.8	9.7	5.7
Denmark	241	-6.7	4.7	1.7
Ireland	18	11.1	11.7	-23.7
Greece	312	2.4	1.9	-0.3
Spain	1416	18.0	3.3	-2.9
Austria	88	6.8	2.7	-1.5
Portugal	172	11.9	3.9	-1.9
Finland	147	3.2	4.2	-1.8
Sweden	595	2.6	1.4	-0.7
United Kingdom	2922	2.8	7.2	0.6
Bulgaria	126	10.3	3.6	0.1
Czech Republic	500	7.0	1.9	-1.9
Estonia	47	-4.0	5.4	-1.0
Cyprus	7	-1.1	2.9	0.6
Latvia	48	12.0	3.1	-4.4
Lithuania	96	5.8	5.9	2.2
Hungary	400	1.9	2.5	1.0
Malta	29	2.3	1.1	-0.4
Poland	918	2.2	3.6	0.1
Romania	170	6.1	3.0	2.8
Slovenia	97	-3.5	2.3	-0.2
Slovakia	188	15.8	7.4	-18.5
EU27	11845	4.1	4.3	-0.2
EU 6	3308	4.9	3.8	-0.4
EU 9	5911	4.0	5.1	-0.1
EU15	9219	4.3	4.6	-0.2
EU new	2626	3.6	3.4	-0.1

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Table 90: Number of enterprises in telecommunications (6420), number of enterprises, average annual growth rate 1995-2007, and average size 2007 and change average change 1995-2007

	<i>Number of Enterprises 2007 Absolute</i>	<i>Annual average growth rate 1995-07 %</i>	<i>Average Size (EU27 = 100)</i>	
			2007	95-07
Belgium	2468	47.4	13.4	-1210.9
Germany	1206	33.0	164.4	-4155.3
France	4549	21.1	30.0	-354.5
Italy	3237	25.9	32.0	-432.8
Luxembourg (Grand-Duché)	71	5.6	18.5	7.5
Netherlands	1245	14.2	33.7	-229.2
Denmark	325	7.1	53.6	-53.1
Ireland	340	34.2	41.8	-1237.8
Greece	341	7.2	68.1	-142.4
Spain	662	-4.8	90.9	17.5
Austria	295	11.1	62.2	-617.2
Portugal	562	14.5	26.0	-180.1
Finland	356	8.1	43.2	-77.2
Sweden	623	10.3	51.2	-104.4
United Kingdom	4668	-2.2	46.4	7.1
Bulgaria	1040	4.6	23.0	-29.3
Czech Republic	662	14.2	30.0	-286.7
Estonia	121	3.8	28.8	8.8
Cyprus	104	16.3	29.3	-91.4
Latvia	346	48.7	15.0	-2814.7
Lithuania	320	34.7	22.7	-1084.8
Hungary	1015	12.1	18.4	-73.2
Malta	0	0	0	0
Poland	4440	22.6	17.0	-213.7
Romania	3297	22.3	15.7	-247.4
Slovenia	261	17.9	20.2	-195.3
Slovakia	126	20.9	75.0	-1485.3
EU27	32680	9.5	35.2	-89.1
EU 6	12776	23.5	40.3	-487.5
EU 9	8172	0.1	50.4	-12.8
EU15	20948	7.2	44.2	-70.7
EU new	11732	16.8	19.0	-152.3

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Table 91: Number of enterprises in Computer and related activities (72), number of enterprises, average annual growth rate 1995-2007, and average size 2007 and change average change 1995-2007

	<i>Number of Enterprises</i>	<i>Annual average growth rate</i>	<i>Average Size (EU27 = 100)</i>	
	2007 <i>Absolute</i>	1995-07 %	2007	95-07
Belgium	14027	8.7	4.3	-0.2
Germany	54100	4.5	8.2	-0.5
France	62735	9.2	6.5	-2.2
Italy	91919	6.0	4.1	-0.2
Luxembourg (Grand-Duché)	1146	10.7	5.8	0.4
Netherlands	21025	6.8	7.3	1.5
Denmark	8276	5.2	6.7	-0.6
Ireland	4924	17.6	7.5	-0.8
Greece	6515	10.7	3.6	0.4
Spain	33072	8.3	7.2	2.0
Austria	12225	11.6	4.0	-0.6
Portugal	12313	28.0	3.3	-1.9
Finland	5519	6.6	7.9	1.8
Sweden	33169	9.1	3.4	-2.8
United Kingdom	109133	6.2	5.5	-3.2
Bulgaria	3592	6.6	5.6	2.0
Czech Republic	24006	5.8	2.6	0.0
Estonia	1345	14.0	5.1	0.8
Cyprus	196	9.8	11.0	1.1
Latvia	1411	17.7	5.6	-2.2
Lithuania	1787	17.2	5.0	-1.5
Hungary	24018	5.8	2.5	1.9
Malta	598	3.6	4.0	2.1
Poland	35288	9.6	3.0	0.8
Romania	13122	18.0	4.5	-0.7
Slovenia	2962	8.4	3.6	1.6
Slovakia	1957	12.9	9.5	3.8
EU27	580380	7.4	5.2	-0.9
EU 6	244952	6.6	5.9	-0.6
EU 9	225146	7.8	5.3	-2.1
EU15	470098	7.2	5.6	-1.3
EU new	110282	8.3	3.3	1.2

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Table 92: Number of enterprises in Recreational, cultural and sporting activities (92), number of enterprises, average annual growth rate 1995-2007, and average size 2007 and change average change 1995-2007

	<i>Number of Enterprises</i>		<i>Average Size (EU27 = 100)</i>	
	<i>2007 Absolute</i>	<i>Annual average growth rate 1995-07 %</i>	<i>2007</i>	<i>95-07</i>
Belgium	n.a.	n.a.	n.a.	n.a.
Germany	n.a.	n.a.	n.a.	n.a.
France	n.a.	n.a.	n.a.	n.a.
Italy	n.a.	n.a.	n.a.	n.a.
Luxembourg (Grand-Duché)	n.a.	n.a.	n.a.	n.a.
Netherlands	n.a.	n.a.	n.a.	n.a.
Denmark	n.a.	n.a.	n.a.	n.a.
Ireland	n.a.	n.a.	n.a.	n.a.
Greece	n.a.	n.a.	n.a.	n.a.
Spain	n.a.	n.a.	n.a.	n.a.
Austria	n.a.	n.a.	n.a.	n.a.
Portugal	n.a.	n.a.	n.a.	n.a.
Finland	n.a.	n.a.	n.a.	n.a.
Sweden	n.a.	n.a.	n.a.	n.a.
United Kingdom	n.a.	n.a.	n.a.	n.a.
Bulgaria	n.a.	n.a.	n.a.	n.a.
Czech Republic	n.a.	n.a.	n.a.	n.a.
Estonia	n.a.	n.a.	n.a.	n.a.
Cyprus	n.a.	n.a.	n.a.	n.a.
Latvia	n.a.	n.a.	n.a.	n.a.
Lithuania	n.a.	n.a.	n.a.	n.a.
Hungary	n.a.	n.a.	n.a.	n.a.
Malta	n.a.	n.a.	n.a.	n.a.
Poland	n.a.	n.a.	n.a.	n.a.
Romania	n.a.	n.a.	n.a.	n.a.
Slovenia	n.a.	n.a.	n.a.	n.a.
Slovakia	n.a.	n.a.	n.a.	n.a.
EU27	n.a.	n.a.	n.a.	n.a.
EU 6	n.a.	n.a.	n.a.	n.a.
EU 9	n.a.	n.a.	n.a.	n.a.
EU15	n.a.	n.a.	n.a.	n.a.
EU new	n.a.	n.a.	n.a.	n.a.

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Trade balance

Table 93: Trade balance in the media and content industries (2211, 2212, 2213, 2214, 2215, 92), trade balance as share of total European trade balance and average annual growth rate 1995-2007

	<i>Trade balance 2007 x 1000</i>	<i>National trade balance as share of total European trade 2007 %</i>	<i>Annual average growth rate trade balance 1995-2007</i>
Belgium	-82	6.3	-12.9
Germany	-2099	162.5	3.6
France	-202	15.6	2.0
Italy	-532	41.2	-1.3
Luxembourg (Grand-Duché)	-362	28.0	-5.4
Netherlands	-384	29.7	6.9
Denmark	514	-39.8	15.6
Ireland	306	-23.7	4.5
Greece	64	-5.0	-4.7
Spain	-417	32.3	-0.1
Austria	-712	55.1	22.6
Portugal	-19	1.5	-3.9
Finland	-39	3.0	-9.8
Sweden	224	-17.3	6.0
United Kingdom	2558	-198.1	-6.2
Bulgaria	31	-2.4	-40.1
Czech Republic	-110	8.5	10.7
Estonia	3	-0.2	-8.2
Cyprus	-1	0.1	49.2
Latvia	18	-1.4	-29.0
Lithuania	27	-2.1	-32.2
Hungary	2	-0.2	-17.9
Malta	-11	0.9	32.8
Poland	-6	0.4	-5.8
Romania	114	-8.8	-15.0
Slovenia	-25	1.9	8.9
Slovakia	-153	11.8	25.1
EU27	-1291	100.0	-7.5
EU 6	-3660	283.4	0.5
EU 9	2480	-192.1	-24.2
EU15	-1180	91.4	-8.2
EU new	-111	8.6	16.9

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Table 94: Trade balance in publishing of books (2211), trade balance as share of total European trade balance and average annual growth rate 1995-2007

	<i>Trade balance</i>	<i>National trade balance as share of total European trade</i>	<i>Annual average growth rate trade balance</i>
	2007	2007	1995-2007
	<i>x 1000</i>	<i>%</i>	
Belgium	-18	1.4	2.9
Germany	-252	19.5	47.3
France	28	-2.2	-11.4
Italy	-53	4.1	9.2
Luxembourg (Grand-Duché)	0	0.0	-16.8
Netherlands	-39	3.1	1.5
Denmark	2	-0.2	-2.5
Ireland	-5	0.4	15.8
Greece	36	-2.8	-22.1
Spain	92	-7.1	-101.2
Austria	-43	3.3	37.1
Portugal	29	-2.2	-25.7
Finland	-14	1.0	11.5
Sweden	14	-1.1	-10.5
United Kingdom	86	-6.6	-33.0
Bulgaria	4	-0.3	-41.2
Czech Republic	30	-2.3	-39.0
Estonia	0	0.0	-0.8
Cyprus	0	0.0	-74.7
Latvia	5	-0.4	-33.2
Lithuania	-1	0.1	9.3
Hungary	23	-1.8	91.8
Malta	0	0.0	-14.5
Poland	15	-1.1	-6.2
Romania	23	-1.8	-73.2
Slovenia	1	-0.1	3.2
Slovakia	-6	0.5	50.2
EU27	-42	3.3	-3.2
EU 6	-333	25.8	13.4
EU 9	198	-15.3	-25.3
EU15	-135	10.5	6.9
EU new	93	-7.2	-40.7

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Table 95: Trade balance in publishing of newspapers (2212), trade balance as share of total European trade balance and average annual growth rate 1995-2007

	<i>Trade balance</i>	<i>National trade balance as share of total European trade</i>	<i>Annual average growth rate trade balance</i>
	2007	2007	1995-2007
	<i>x 1000</i>	<i>%</i>	
Belgium	-13	1.0	2.8
Germany	-426	33.0	-39.4
France	13	-1.0	-1.2
Italy	-43	3.3	7.0
Luxembourg (Grand-Duché)	0	0.0	-10.4
Netherlands	-39	3.0	-3.6
Denmark	3	-0.3	-2.1
Ireland	-38	3.0	6.5
Greece	38	-3.0	-2.3
Spain	124	-9.6	-107.7
Austria	-98	7.6	39.3
Portugal	30	-2.3	-26.7
Finland	-53	4.1	11.6
Sweden	35	-2.7	-10.8
United Kingdom	146	-11.3	-34.4
Bulgaria	9	-0.7	-31.0
Czech Republic	23	-1.8	13.7
Estonia	1	0.0	-16.3
Cyprus	9	-0.7	-77.5
Latvia	5	-0.4	-19.9
Lithuania	-1	0.1	-4.0
Hungary	23	-1.8	-62.6
Malta	0	0.0	-11.5
Poland	14	-1.1	-11.3
Romania	17	-1.3	-10.2
Slovenia	2	-0.2	-6.3
Slovakia	-20	1.6	46.6
EU27	-237	18.4	10.6
EU 6	-507	39.2	13.7
EU 9	188	-14.5	-17.6
EU15	-319	24.7	12.1
EU new	82	-6.3	18.4

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Table 96: Trade balance in publishing of journals and periodicals (2212), trade balance as share of total European trade balance and average annual growth rate 1995-2007

	<i>Trade balance</i>	<i>National trade balance as share of total European trade</i>	<i>Annual average growth rate trade balance</i>
	2007	2007	1995-2007
	<i>x 1000</i>	<i>%</i>	
Belgium	-11	0.9	3.7
Germany	-204	15.8	38.6
France	19	-1.5	-3.7
Italy	-36	2.8	8.8
Luxembourg (Grand-Duché)	0	0.0	-10.0
Netherlands	-54	4.2	2.9
Denmark	3	-0.2	-2.5
Ireland	-15	1.2	11.4
Greece	26	-2.0	-8.8
Spain	49	-3.8	-115.8
Austria	-74	5.7	42.4
Portugal	26	-2.0	-33.6
Finland	-31	2.4	20.3
Sweden	16	-1.3	4.4
United Kingdom	201	-15.5	-37.7
Bulgaria	4	-0.3	-45.4
Czech Republic	12	-0.9	-17.7
Estonia	0	0.0	5.4
Cyprus	3	-0.2	84.5
Latvia	8	-0.6	-51.8
Lithuania	-1	0.1	-10.9
Hungary	25	-2.0	-70.7
Malta	0	0.0	0
Poland	8	-0.6	21.8
Romania	15	-1.2	-38.0
Slovenia	1	0.0	-17.7
Slovakia	-73	5.6	79.3
EU27	-82	6.4	2.6
EU 6	-286	22.2	11.8
EU 9	201	-15.6	-26.0
EU15	-85	6.6	2.6
EU new	3	-0.2	-2.9

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Table 97: Trade balance in publishing of sound recordings (2214), trade balance as share of total European trade balance and average annual growth rate 1995-2007

	<i>Trade balance</i>	<i>National trade balance as share of total European trade</i>	<i>Annual average growth rate trade balance</i>
	2007	2007	1995-2007
	<i>x 1000</i>	<i>%</i>	
Belgium	0	0.0	4.1
Germany	-17	1.3	64.5
France	22	-1.7	-18.2
Italy	-2	0.2	1.3
Luxembourg (Grand-Duché)	0	0.0	#DIV/0!
Netherlands	-2	0.1	5.3
Denmark	0	0.0	9.8
Ireland	0	0.0	0.0
Greece	2	-0.2	-21.8
Spain	3	-0.2	-95.2
Austria	-5	0.4	32.3
Portugal	4	-0.3	-55.1
Finland	-3	0.2	25.2
Sweden	3	-0.2	-8.8
United Kingdom	9	-0.7	-34.1
Bulgaria	0	0.0	0
Czech Republic	0	0.0	26.6
Estonia	0	0.0	13.0
Cyprus	0	0.0	0
Latvia	0	0.0	-22.9
Lithuania	0	0.0	11.8
Hungary	2	-0.1	-79.1
Malta	0	0.0	-7.7
Poland	1	0.0	21.0
Romania	2	-0.1	-31.3
Slovenia	0	0.0	17.8
Slovakia	0	0.0	0
EU27	18	-1.4	-9.5
EU 6	1	0.0	-20.7
EU 9	13	-1.0	-17.3
EU15	14	-1.1	-6.1
EU new	5	-0.4	-20.1

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Table 98: Trade balance in other publishing (2215), trade balance as share of total European trade balance and average annual growth rate 1995-2007

	<i>Trade balance</i>	<i>National trade balance as share of total European trade</i>	<i>Annual average growth rate trade balance</i>
	2007	2007	1995-2007
	<i>x 1000</i>	<i>%</i>	
Belgium	-1	0.1	0.5
Germany	-25	2.0	51.7
France	12	-0.9	-28.5
Italy	-6	0.4	15.1
Luxembourg (Grand-Duché)	0	0.0	-14.9
Netherlands	-1	0.1	-0.2
Denmark	0	0.0	-3.0
Ireland	-1	0.1	-25.0
Greece	6	-0.5	-25.3
Spain	15	-1.2	-134.8
Austria	-4	0.3	39.4
Portugal	3	-0.3	-42.3
Finland	-3	0.2	11.5
Sweden	2	-0.2	-14.0
United Kingdom	33	-2.5	-43.1
Bulgaria	0	0.0	-4.5
Czech Republic	2	-0.2	-31.2
Estonia	0	0.0	13.0
Cyprus	0	0.0	58.0
Latvia	0	0.0	-25.2
Lithuania	0	0.0	1.0
Hungary	3	-0.2	-70.3
Malta	0	0.0	-14.5
Poland	1	-0.1	8.3
Romania	2	-0.1	8.2
Slovenia	0	0.0	9.9
Slovakia	-16	1.2	71.0
EU27	23	-1.8	-32.0
EU 6	-22	1.7	14.6
EU 9	52	-4.0	-107.9
EU15	30	-2.3	-17.8
EU new	-7	0.5	2.6

Source: Eurostat, Structural Business Statistics/National Accounts/TNO.

Table 99: Trade balance in recreation, cultural and sporting activities (92), trade balance as share of total European trade balance and average annual growth rate 1995-2007

	<i>Trade balance</i>	<i>National trade balance as share of total European trade</i>	<i>Annual average growth rate trade balance</i>
	2007	2007	1995-2007
	<i>x 1000</i>	<i>%</i>	
Belgium	-39	3.0	-17.6
Germany	-1174	90.9	-1.2
France	-296	22.9	7.5
Italy	-393	30.4	-3.0
Luxembourg (Grand-Duché)	-362	28.0	-5.4
Netherlands	-249	19.3	17.5
Denmark	505	-39.1	16.5
Ireland	366	-28.4	3.5
Greece	-46	3.5	-3.8
Spain	-700	54.2	4.3
Austria	-489	37.9	18.2
Portugal	-111	8.6	10.1
Finland	65	-5.0	-4.4
Sweden	153	-11.9	8.9
United Kingdom	2084	-161.4	-4.5
Bulgaria	13	-1.0	0
Czech Republic	-179	13.8	13.3
Estonia	2	-0.1	0
Cyprus	-14	1.0	0
Latvia	-1	0.0	0
Lithuania	30	-2.3	-18.3
Hungary	-73	5.7	11.0
Malta	-12	0.9	15.9
Poland	-44	3.4	37.1
Romania	56	-4.3	-14.5
Slovenia	-29	2.3	8.5
Slovakia	-37	2.9	11.5
EU27	-971	75.2	-9.2
EU 6	-2513	194.6	-2.0
EU 9	1828	-141.6	-24.7
EU15	-684	53.0	-11.7
EU new	-287	22.2	19.5

Source: Eurostat. Structural Business Statistics/National Accounts/TNO.

G Selected statistics on Advertising (7440)

Table 100: Employment in Advertising (7440). Average annual growth rate 1995-2007. Concentration index 1995 and change 1995-2007

	<i>Number of working persons 2007 x 1000</i>	<i>Annual average growth rate employment 1995-07 %</i>	<i>Concentration index (EU27 = 100)</i>	
			1995	95-07
Belgium	14.229	-1.3	131	75
Germany	214.977	1.5	146	125
France	163.123	4.8	126	147
Italy	56.064	4.9	44	52
Luxembourg (Grand-Duché)	1.193	7.2	74	83
Netherlands	58.929	5.1	138	159
Denmark	24.483	5.5	149	195
Ireland	4.987	6.2	57	55
Greece	13.944	10.0	33	69
Spain	114.795	3.1	180	129
Austria	21.601	7.6	76	124
Portugal	16.475	3.2	76	75
Finland	7.830	3.9	73	73
Sweden	30.403	0.4	215	156
United Kingdom	91.679	-0.9	112	67
Bulgaria	10.375	10.0	29	65
Czech Republic	26.592	3.7	102	118
Estonia	2.545	5.3	66	92
Cyprus	783	1.1	71	47
Latvia	5.014	14.8	30	104
Lithuania	6.855	25.4	9	104
Hungary	12.570	19.4	13	70
Malta	890	3.9	124	129
Poland	46.591	13.3	21	71
Romania	21.065	21.6	8	52
Slovenia	2.329	10.4	24	56
Slovakia	6.879	16.7	16	73
EU27	977.200	3.5	100	100
EU 6	508.515	3.1	116	113
EU 9	326.197	2.0	122	97
EU15	834.712	2.7	118	106
EU new	142.488	11.1	30	74

Source: Eurostat. Structural Business Statistics/National Accounts/TNO.

Table 101: Value added in Advertising (7440). Value added as share of total value added national economy and average annual growth rate 1995-2007 (in constant prices 2000)

	<i>Value added</i>	<i>Value added as share in</i>	<i>Annual average growth</i>
	2007	total national economy	rate value added
	<i>x million Euro</i>	2007	1995-2007
		%	%
Belgium	635	1.8	0.6
Germany	7.530	21.0	-4.2
France	6.741	18.8	3.8
Italy	1.907	5.3	3.0
Luxembourg (Grand-Duché)	27	0.1	0.6
Netherlands	1.785	5.0	-2.7
Denmark	717	2.0	2.2
Ireland	399	1.1	11.5
Greece	362	1.0	-4.1
Spain	3.161	8.8	4.3
Austria	799	2.2	3.8
Portugal	360	1.0	2.1
Finland	438	1.2	5.2
Sweden	1.513	4.2	5.6
United Kingdom	7.437	20.8	0.6
Bulgaria	66	0.2	12.8
Czech Republic	431	1.2	21.5
Estonia	35	0.1	7.6
Cyprus	28	0.1	2.6
Latvia	59	0.2	17.7
Lithuania	68	0.2	10.5
Hungary	181	0.5	8.7
Malta	11	0.0	-2.0
Poland	846	2.4	6.7
Romania	88	0.2	17.3
Slovenia	50	0.1	3.4
Slovakia	113	0.3	20.3
EU27	35.785	16.4	0.5
EU 6	18.625	16.6	-1.1
EU 9	15.184	16.6	2.0
EU15	33.809	16.6	0.1
EU new	1.976	14.4	9.7

Source: Eurostat. Structural Business Statistics/National Accounts/TNO.

Table 102: Number of enterprises in Advertising (7440). number of enterprises. average annual growth rate 1995-2007. and average size 2007 and change average change 1995-2007

	<i>Number of Enterprises</i>	<i>Annual average growth rate</i>	<i>Average Size (EU27 = 100)</i>	
	2007 <i>Absolute</i>	1995-07 %	2007	95-07
Belgium	5.055	-0.5	2.8	-0.3
Germany	28.394	-1.7	7.6	2.4
France	24.762	4.4	6.6	0.3
Italy	21.242	6.3	2.6	-0.5
Luxembourg (Grand-Duché)	398	6.9	3.0	0.1
Netherlands	15.445	3.8	3.8	0.5
Denmark	2.669	1.8	9.2	3.2
Ireland	482	8.1	10.3	-2.3
Greece	4.119	4.6	3.4	1.5
Spain	26.781	6.7	4.3	-2.2
Austria	7.794	9.9	2.8	-0.8
Portugal	4.762	4.0	3.5	-0.3
Finland	3.116	3.6	2.5	0.1
Sweden	13.909	3.5	2.2	-1.0
United Kingdom	13.325	1.7	6.9	-2.5
Bulgaria	3.054	5.7	3.4	1.3
Czech Republic	13.567	4.9	2.0	-0.3
Estonia	651	11.3	3.9	-3.7
Cyprus	138	-0.1	5.7	0.8
Latvia	1.212	16.2	4.1	-0.6
Lithuania	1.406	10.6	4.9	3.8
Hungary	5.141	3.7	2.4	2.0
Malta	227	0.9	3.9	1.1
Poland	16.252	8.6	2.9	1.1
Romania	6.138	28.5	3.4	-3.2
Slovenia	1.080	-2.3	2.2	1.7
Slovakia	1.748	12.6	3.9	1.4
EU27	222.867	3.9	4.4	-0.2
EU 6	95.296	2.0	5.3	0.6
EU 9	76.957	4.6	4.2	-1.5
EU15	172.253	3.1	4.8	-0.2
EU new	50.614	7.3	2.8	1.0

Source: Eurostat. Structural Business Statistics/National Accounts/TNO.

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Title: Statistical, ecosystems and competitiveness analysis of the media and content industries: The media and content industries. A quantitative overview

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Abstract

This report offers a quantitative statistical approach to the Media and Content Industries (MCI). It is based on official data sources and complemented with data from non-official data sources. The current OECD definition of the MCI sector is discussed, as regards the limitations of the definition itself and of its operationalization. The approach taken in the collection of data, and also problems with data availability, are dealt with.

The official data sources consulted include Eurostat data for EU Member States, the OECD and national statistical offices. In addition, the report draws on a number of non-official sources which complement official statistics and contribute to a better analysis and understanding of the economic profile of the MCI sector, particularly when describing new developments not (yet) covered by official statistics. Data from non-official sources to describe some emerging trends regarding the effect of ICT on the MCI are also provided.

The study contains an economic profile of the Media and Content Industries for the individual EU Member States and for the US, Japan, India and China.

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Key policy areas include: environment and climate change; energy and transport; agriculture and food security; health and consumer protection; information society and digital agenda; safety and security including nuclear; all supported through a cross-cutting and multi-disciplinary approach.

