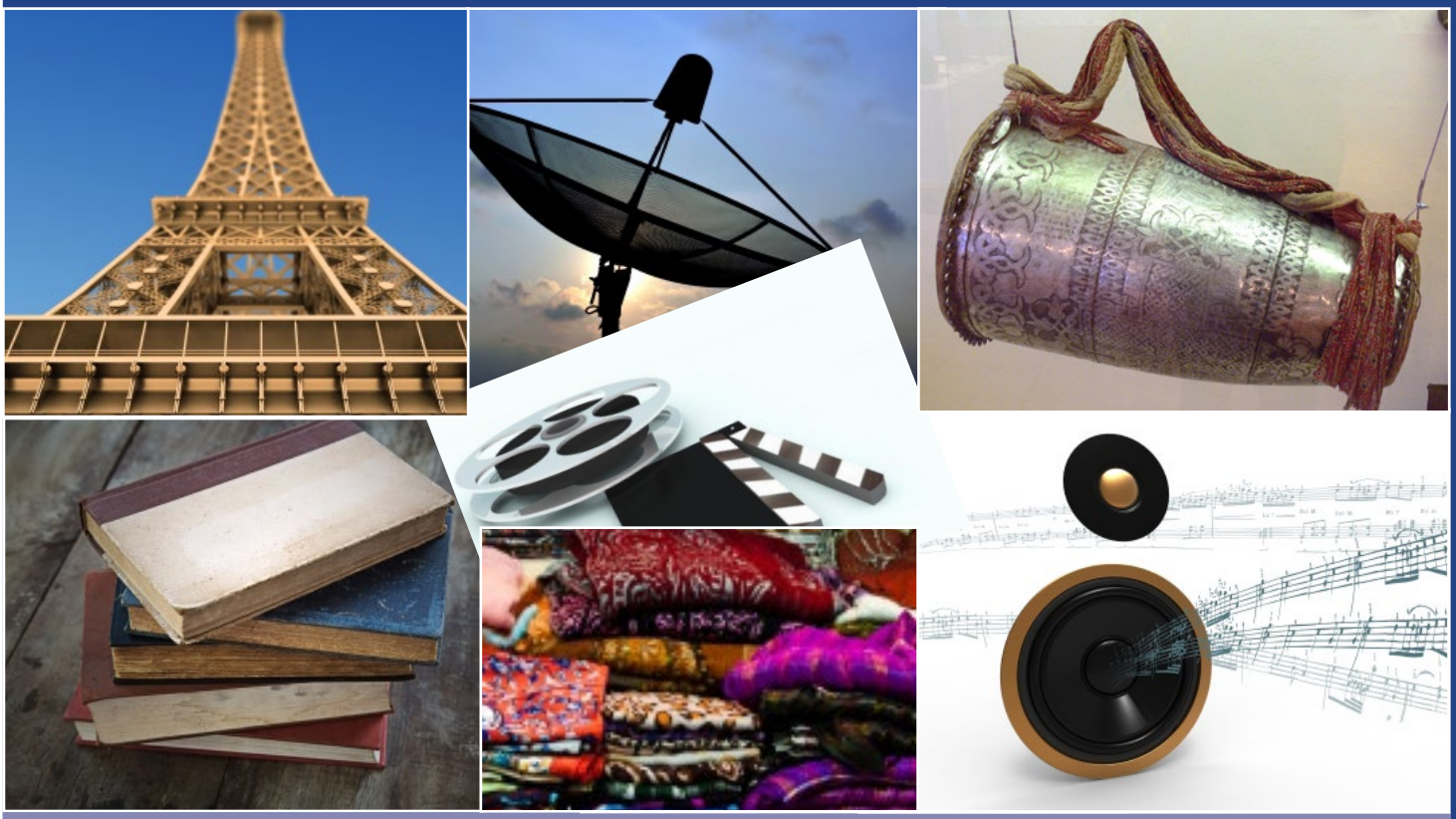
The Economic Contribution of Copyright Industries in France



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The Economic Contribution of Copyright Industries in France

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Summary

In France, copyright industries (CIs) a**ccounted for 7.02 per cent of GDP, 7.29 per cent of the volume of full-time equivalent employment, 6.48 per cent of the number of persons engaged in an occupation, 9.54 per cent of exports and 11.46 per cent of imports in 2012**. These figures are culled from France's national accounts for 2012, using the method of analysis recommended by the World Intellectual Property Organization (WIPO). They are both noteworthy and consistent with common interpretations of the role of creative industries in a globalized knowledge economy. When compared with past trends, it can be seen that the proportions of these contributions are changing slowly, even though there are differences between the four sub-types of copyright industries. The "core" copyright industries, which are contribute more in terms of value added and jobs, are changing slowly over time and show a positive external trade balance. Conversely, the partial copyright industries, which are closer to the global market than core copyright industries, fluctuate faster and show a negative external trade balance. Trends in non-dedicated support industries are largely similar to those in partial copyright industries and reflect their characteristics quite closely, even if they are on a much smaller scale. Interdependent copyright industries are too weak to draw many lessons from their checkered development.

This report provides some answers to questions about the nature of CIs, which are often portrayed as spearheading the development of the knowledge economy. Their role is significant and they have multiplier effects through their multiple ramifications. On the one hand, they show original behavior in employment: they are somewhat unresponsive to changes in value added and they bring together more skilled and stable jobs – their ratio of full-time employment is higher than their ratio of persons employed, that is, regardless of length of employment. On the other hand, while CIs perform quite well during periods of growth, even when it is slow (1999-2008), they do not automatically act as a buffer against crises, as has sometimes been claimed. Moreover, their productivity and their contribution to exports are not as obviously significant as is claimed in some quarters.

A further point is that the potential of CIs does not appear to have been sufficiently exploited. No doubt these CIs must address the challenges of uncertainty and significant production cost pressures, but in France, they are also clearly buttressed by history, training and public support and can therefore provide the development leverage that the country seeks.

Introduction

Background

Today, copyright industries are considered to be among the main drivers of socio-economic development. The creation and expression of new knowledge and the goods and services that such new knowledge generates can be largely traced back to the granting of copyright. Accordingly, recognizing, respecting and adding value to copyright can give impetus to sustainable development. Since it began in the 19th century, this trend has grown in importance over time, thanks to the development of digitization and globalization, to such an extent that the industries now known as copyright industries are at the centre of discussions of contemporary development in particular and the creative economy in general.

Copyright industries do not have pride of place in France, even though historically France played a significant role in the emergence, formalization and regulation of copyright. Although the past few years have seen a multitude of studies on the weight of culture, studies on the broader approach to creative industries are both less common and tend to focus on the spectacular nature of certain companies or activities. Nonetheless, the following literature is noteworthy: the regular reports of the Ministry of Culture (Department for Planning, Strategic Foresight and Statistics, DEPS) on the role of culture, with the report published in late 2012 providing the first bird's-eye view of creative industries; studies in Île-de-France (Paris Region Planning and Development Agency, IAU); a quite recent report on copyright, albeit within the purview of cultural industries; and the joint report of the Ministries of Culture and Finance. This suggests a typically French approach: although France played an important early role in the international recognition of copyright, it still considers copyright as much a moral right as an economic one, and studies intended to assess its economic potential are viewed somewhat askance. However, there is change in the air, and the economic potential of copyright now features in economic discussions.

This study was conducted at the behest of the World Intellectual Property Organization (WIPO). The statistical bases used are from the French National Institute of Statistics and Economic Studies, INSEE, and the methodology follows WIPO's *Guide on Surveying the Economic Contribution of the Copyright-Based Industries*.

Objectives

The principal objective of this study is to evaluate the major variables that are representative of copyright industries – value added, employment and exports – and thereby demonstrate their impact on the socio-economic environment of France. This study is thus a first step; its methodological contribution may be subsequently updated. It also discusses global trends in copyright industries, particularly those that have pride of place in France, such as fashion and cinema. The main value chains of these two industries are described, together with their strengths and limitations. The study adopts a cautious approach to the possible multiplier effect of industries in light of the dearth of inter-industry trade tables reflecting the purposes of copyright. Moreover, the methodology recommended by WIPO distinguishes between various types of copyright industries and thus provides an overview of these interlinkages and benefits.

Scope of the study

Copyright industries can be divided into four subsets based on the approach that has been used by WIPO's Creative Industries Division for more than 10 years.

Core copyright industries are those that are entirely dedicated to the creation, production, execution, performance, communication and distribution and sale of objects protected by copyright. They include literature, music, theater, cinema, the media, photography, software, visual arts, advertising services and copyright collective management societies.

Interdependent copyright industries produce, manufacture and sell equipment that facilitates the creation, production and use of works and other protected materials. They include the manufacture and sale of equipment such as television sets, compact disc recorders and computers, musical instruments and

photographic materials, photocopiers and recording materials. These industries enable the production, distribution and consumption of copyright-protected goods and services.

Partial copyright industries are those dedicated to activities and objects only partly protected by copyright; other parts may not be subject to copyright. The part subject to copyright should be construed broadly, because this is the part that can be protected. An example is when brands come together to avail themselves of copyright protection. This can be seen in creation, architecture, jewelry, furniture and other craft products. The part that is subject to copyright may vary, depending on whether it is protected by copyright legislation, but it is obviously the potential impact of these rights that should serve as a guide.

Non-dedicated support industries are indirectly linked to copyright-protected objects, but the copyright protection concerns only a small portion of their activities. They include the telephony, transport and wholesale industries in general. Their copyright contribution to these industries is calculated based on a properly weighted copyright factor.

Methodology

The methodology is of course that recommended by WIPO and it is applied to data from the French national accounts.

Chapter 1 presents an overview of the French copyright system.

Chapter 2, which is fundamental to this report, assesses the weight of CIs and each of their subsets in the economy, successively analyzing the key indicators: gross domestic product (GDP), employment and external trade. The assessment uses information covering 2012, the last year for which there is reliable data, even though France's economic climate and growth were fairly lackluster in that year, requiring a number of data reviews that might give rise to inconsistencies with the data from previous years.

Chapter 3 is a dynamic analysis of these CIs, using the same key indicators: GDP, employment and external trade. The review period is 1999-2011, for two reasons. Firstly, this period is quite long and can be said to span a cycle – during this time, there was a growth phase followed by a slump, although in France, the scale of these changes was smaller than in other countries. This dynamic analysis will help to illustrate the duality of CIs, which fall under both creative industries and the more traditional manufacturing industries. It is immediately apparent that there are some discrepancies between the comparison of the 1999-2011 period and the data for 2012. This is due to database amendments at the time. Thus, Chapter 2 should be considered as an illustration of the role of CIs and Chapter 3 as an illustration of the dynamics of CIs.

Chapter 4, the last, illustrates CIs with three activities that, each in its own way, play an important role in France: cinema, fashion and video games. The first is important because of its influence on cultural policy and cultural exception; the second because it is a very old creative industry of worldwide renown; and the last because it reflects the experiences and limitations of a new creative industry. This chapter will mainly review existing literature; reports from government departments and chambers of commerce; and interviews.

Key results

In 2012, CIs in France accounted for 7.02 per cent of GDP, 7.29 per cent of the full-time equivalent (FTE) amount of employment, 6.48 per cent of employment in terms of the number of people employed, 9.54 per cent of exports and 11.46 per cent of imports. These figures are illustrative and are consistent with the usual evaluations of the role of the copyright industries in a globalized knowledge economy. The reference period for the dynamic analysis is 1999-2011. During that period, while CIs performed fairly well during periods of growth, however slight (1999-2007, this changed in the years following the financial crisis of 2007 and 2008. Moreover, the increase in productivity was minimal and the contribution of copyright industries to exports was weak, as was their performance in external trade, although these industries adopted a rather original approach to employment that appears to have protected jobs. These features are not what is generally expected of creative activities, but a close look at the data will soon dispel any doubts. This report will attempt to reinterpret the data in terms of relatively hybrid industries that combine features of the traditional cultural economy with features of the traditional industrial sectors. This reappraisal will also help to clarify the respective dynamics of the four CI sub-groups.

1. The French copyright system

1.1 Copyright in France

Copyright in France is governed by the 1992 Intellectual Property Code (CPI), which codified the laws governing intellectual property rights, including the laws of March 11, 1957 and July 3, 1985. The law on copyright and neighboring rights in the information society, passed in 2006 (the DADVSI Law), which was a transposition into French law of directive 2001/29/CE, is also incorporated into the CPI.

According to the law, an author is any individual who creates a work of the mind, regardless of its genre (literary, musical or artistic), its form of expression (oral or written) and its merit or purpose (artistic or utilitarian). Copyright therefore covers all intellectual works: literary works (books, newspapers, plays, software, websites, etc.); works of art (paintings, sculptures, photography, infographic images, architecture, etc.); and musical or audiovisual works, if they are materialized and original, originality being understood as the expression of the author's personality. For this reason, copyright protection does not encompass purely notional products of the mind such as an idea, a concept, a commonly used word or a method.

As with the copyright treaties administered by WIPO, French law affords copyright protection to books, musical works, paintings, sculptures, films, computer programs, databases, advertising creations, geographical maps and technical drawings. Thus, copyright-protected works include, but are not limited to the following: literary works (novels, poems, plays, reference works and newspapers), films, musical compositions and choreographic works; artistic work such as paintings, drawings, photographs and sculptures; and architectural works.

1.1.1 *The substance of copyright*

Under articles L.111-1 and L.123-1 of the Intellectual Property Code, the author of a work of the mind has exclusive ownership of it from the time it is created, without a requirement to fulfill any formalities (filing or registration), for a time corresponding to the lifetime of the author and 70 years following the calendar year of his or her death, to the benefit of the author's heirs. After that time, the work lapses into the public domain.

Under article L. 111-1 of the Intellectual Property Code: *"The author of a work of the mind shall enjoy in that work, by the mere fact of its creation, an exclusive incorporeal property right which shall be enforceable against all persons. This right shall include attributes of an intellectual and moral nature as well as attributes of an economic nature […]"*. Article L.123-1 states: *"The author shall enjoy, during his lifetime, the exclusive right to exploit his work in any form whatsoever and to derive monetary profit therefrom. On the death of the author, that right shall subsist for his successors in title during the current calendar year and the 70 years thereafter"*.

In case of dispute, evidence of the existence of the work on a given date and its copyright must be provided.

This copyright in fact covers two types of rights:

- A moral right granting the author respect for the author's name, authorship and work, which is not time-bound (that is, it is of unlimited duration), is inalienable (cannot be transferred to another person) and perpetual (it can be transferred to the author's heirs). This moral right is therefore not extinguishable and persists even when the work lapses into the public domain. Article L 121-1 of the CPI defines the moral right as follows: *"An author shall enjoy the right to respect for his name, his authorship and his work. This is a personal right. It shall be perpetual, inalienable and non-extinguishable. It may be transmitted mortis causa to the heirs of the author. Exercise thereof may be conferred on another person under the provisions of a will"*. It encompasses *"the right of disclosure, the right of ownership, the right to respect for the work and the right of withdrawal or reconsideration"*.

- Property rights are exercised throughout the author's lifetime and may be transferred to his or her heirs for the following 70 years. The exclusive right of exploitation thus granted to the author enables him or her to profit therefrom by assignment. The property rights are the right of performance, which enables

the author to authorize or refuse the public dissemination of the work, either by public performance or broadcast by radio, cable or satellite; and the right of reproduction, which authorizes or refuses reproduction of the work in various forms, for example, in print or sound recordings, or their recording or physical fixation. The author also has the rights to authorize translation of his or her work into other languages and to agree to adaptations. The assignment of such rights is made through a written contract drafted by the author, stating the conditions and duration of the assignment of rights.

There are a number of exceptions to these rights, restrictively construed in case law (Court of Cassation judgment of February 28, 2006): private and gratuitous performance in a family setting; copying and reproduction for the strictly private use of the copier; and publication of a quotation or an analysis of the work, provided it is brief and justified by the critical, polemical, pedagogical, scientific or informational nature of the work; and parody and caricature. The law of 2006 added fresh exceptions to these traditional ones, in particular exceptions for disabled persons and for education, and specifically instituted a three-step test (article L. 1225 of the CPI) to ensure that these exceptions do not adversely affect the normal exploitation of the work or unduly prejudice the legitimate rights of the author.

1.1.2 *Neighboring rights*

In addition to copyright *stricto sensu*, the law of 1985 established neighboring rights. Before then, artists, performers and prominent actors received no remuneration in respect of their intellectual property rights for the broadcast of works in which they appeared. The law then vested rights in performing artists, producers of phonograms and videograms and audiovisual communication companies. All these persons may therefore authorize or prohibit the use and exploitation of their works and obtain remuneration in return for their authorization. Moreover, performing artists also have a moral right.

To facilitate the broadcasting of phonograms, article L. 2141 of the Intellectual Property Code introduced the "equitable remuneration" principle (reflecting the Rome Convention of 1961) under which, if a phonogram is published for commercial purposes, the performing artist and the producer cannot refuse its public communication and will receive equitable remuneration in exchange, based on the proceeds of the exploitation or as a lump sum. Pursuant to article L. 2145 of the CPI, a rights collecting and distributing society must collect this remuneration. In this case, "SPRÉ" (Society for the Collection of Equitable Remuneration, website www.spre.fr), collects remuneration from users and distributes it to four societies representing the following:

– performing artists: ADAMI (Society for the Administration of Artisans and Performing Musicians) and SPEDIDAM (Society for the Receipt and Distribution of Dance and Music Performer's Rights)

– producers: SCPP (Society for the Civil Administration of Phonograph Producers), which includes multinationals, and SPPF (Civil Union of French Phonogram Producers), which works for independent labels.

1.1.3 *Copyright in the digital age*

The digital environment obviously raises the issue of copyright redeployment or the creation of mechanisms to protect it. The Phéline Report, submitted on December 18, 2013 to the Minister of Culture, highlighted the imbalances inherent in the contractual relationships between platforms and rightholders, in addition to producers and artists. The report recommended improved protection for performing artists by fixing, among other things, *"principles governing their remuneration for digital exploitation"* and, failing an agreement between business partners on the remuneration of artists within a reasonable time, the institution of obligatory collective management of the remuneration. This is therefore a burning issue in France and elsewhere, in that it affects the following:

- the modification of publishing contracts; and
- the status of transformative works.

Publishing contracts

For authors, these rights are exercised through publishing contracts for books or similar contracts in other areas. However, publishing contracts are now the object of considerable scrutiny followind changes in technology and the entry of more countries into the European Union. Law No. 2014-779 of July 8, 2014 empowered the government to take any legislative measure it deemed appropriate to amend the provisions of the Intellectual Property Code relating to publishing contracts in light of the framework agreement of March 21, 2013 between the Permanent Council of Writers and the National Publishing Union. The framework agreement concerned book-publishing contracts in the digital era and was adopted following groundwork undertaken since June 2012, including the preparation of a legal report by Professor Sirinelli. Several provisions were agreed, with the support of the stakeholders, as follows:

- Publishing contracts must henceforth cover the number of copies of a book and digital books. Thus, the contracts must stipulate in two distinct parts the conditions governing the assignment of rights for print books and digital books.
- The accounting obligations of publishers have been made more stringent.
- Contracts must include a provision allowing the author or the publisher to cancel the entire contract in the event of an absence of business activities.

Since the provisions of the Intellectual Property Code governing publishing contracts do not concern the book sector, but instead music and press publishing, for example, the part of the Intellectual Property Code governing publishing contracts has been restructured in order to distinguish between general contractual obligations and the specificities of certain sectors.

The Ministry of Culture considers this legislation and regulation to be a positive development in the strengthening of links between culture and the Europe 2000 strategy. In its view, the provisions should give pause to those who seek to dismantle the agreement already embodied in the 2001 directive (Declaration of November 18, 2014 before the Higher Council of Literary and Artistic Property).

The challenge of transformative works

Transformative works are works borrowing from previous works. This type of transformation has always existed, but the World Wide Web and digital technology have opened up broad new vistas. For example, the digital assembly of visual or sound elements from various sources, or *mashups*, *remixes* and other mechanisms, raises questions as to the resulting challenges to copyright. A report to the Minister of Culture dated October 6, 2014 (the Benabou Report) now provides a framework for considering legislative and regulatory amendments in this regard.

Today, any artist who borrows an original part of a protected work to form his own creation must seek the prior authorization of the author of the original work. As securing such authorization is often complicated, a good many *transformative artists* prefer to work illegally and risk prosecution for counterfeiting. The question arises as to whether the list in article L. 1225 of the IPC should be expanded to create a specific exception for transformative works. This is the solution adopted in the United States, where legislation provides an exception to the monopoly of copyright for such works. The same applies in Canada, provided the following conditions are met: the source is cited; there is no commercial export; the primary work suffers no damage or loss of earnings; and there is no reasonable presumption of non-counterfeit. Although the Benabou report rejects the American solution, it examines the Canadian approach, but finds that it is difficult to meet such criteria given the number and interconnection of stakeholders online. So the Canadia approach is ultimately discarded, except as concerns the right of citation (recommendation no. 6).

The report also makes proposals for legislative measures, taking the view that it is impossible to ignore the principle of legalizing transformative works, for fear of pushing transformative artists towards works that are free of rights, and that instead, the penalization of transformative artists should be avoided. The first proposal is to create a registry of material in the public domain; that is, material that is free of rights, so as to guarantee "effective access to creative material, in particular by increasing modes of access to information on rights". Another option would be to "expressly recognize the copyright of transformative artists". A third solution would be for transformative artists to challenge digital watermarking, which immediately

deletes their creations if they contain any element of a previously existing work. Finally, the report suggests that distribution platforms be empowered to centralize the acquisition of the requisite authorizations for exploitation for their users. Creators of transformative works will therefore be able to operate within the law without being personally required to obtain such authorizations.

1.2 Collective copyright management

1.2.1 *The principle*

In France, authors can manage their rights individually or transfer the management to a collective management society. The rationale for collective management is immediately obvious: once the work is created, the author cannot keep abreast of all the exploitation and use of his work, especially in the digital age, where reproductions and versions from one content platform to another further complicate matters. Collective management thus appears to be the ideal means of avoiding significant transactional costs and as a means for authors to directly derive actual benefits from their intellectual property rights. It might even be argued that collective management societies also benefit when artists appoint them to manage their rights, because the more numerous the artists, the greater the economies of scale. In France, the collective aspect of copyright management has always existed, starting with the advocacy of authors and actors led by Beaumarchais before the French Revolution, followed by the efforts of musicians in the mid-19th century, which triggered the creation of one of the oldest collective management societies, SACEM.

The principle of these societies is to enter into contracts of a general nature with users (press groups, television channels, cinemas, theaters, discotheques, etc.) and to share the rights thus collected among their member authors. The very term "copyright" is somewhat inaccurate in that there are as many societies managing copyright as there are managing neighboring rights. While the first group collects and receives remuneration for copyright *stricto sensu* (authors, composers, etc.), the second group collects and distributes remuneration for neighboring rights (performing artists and phonogram producers) (https://en.wikipedia.org/wiki/DADVSI). All these societies can also offer other services, such as promoting the works of their members, cultural activities, legal advice, etc. This does not seem to be a defining characteristic of French societies.

In France, these societies operate under private law, although they perform a service recognized to be beneficial. Disputes between rightholders and their management societies are legion and byzantine. The bone of contention is mainly the concentrated distribution of rights, which some authors consider to be caused by the predilection of a specific society for better-known authors, to the ensuing detriment of the majority. A nother source of disagreement is the onerous management fees which, according to all the artists, lead to low rights earnings. The book *Main basse sur la musique* aroused considerable hostility to the most powerful of these collecting societies, eventually leading French authorities to entertain the principle of a single market and spelling the end of the *de facto* monopoly of these societies. This disagreement had other repercussions. The law of August 1, 2000 established a **Standing Committee** to supervise collecting and distributing societies. Under the aegis of the Court of Auditors, the committee is composed of five members drawn from higher courts and the general inspectorates of finance and culture. Members are appointed for five years by decree. The committee has oversight of the accounts and management of collecting and distributing societies, together with their subsidiaries and affiliates. Although the principle of public oversight of private enterprises was challenged, it prevailed.

1.2.2 *Collective copyright management societies*

The first category concerns copyright collecting and distributing societies (SPRD), strictly construed.

- The best known is undoubtedly SACEM, which is the main copyright management company. It is a not-for-profit partnership managed by music-makers and publishers. It encourages the creation of music by protecting, representing and serving the interests of music authors, composers and publishers. Its main remit is to collect copyright remuneration in France and redistribute it to creators from France and the rest of the world. SACEM has developed a unique collection model. It prepares a list of all works distributed, event by event, and thus determines who receives the remuneration for the rights. SACEM has local branches all over France and collects 80 per cent of rights through this painstaking, "programming" process. If it is not possible to proceed in this manner, SACEM teams can also create "listening records"

during events. These 7,000 hours of recordings are then analyzed to identify the beneficiaries. SACEM's methods are different from those employed by foreign companies, which focus more on estimates and surveys, a method which is less expensive but a great deal less equitable than SACEM's.

- Nonetheless, the oldest SPRD is the SACD, created by Beaumarchais in 1777, which collects and distributes the rights of 40,000 playwrights, choreographers, stage directors, composers, producers and scriptwriters.
- The Civil Society of Multimedia Authors (SCAM) represents nearly 22,000 directors, interviewers, commentators, writers, translators, journalists, video-makers, photographers and illustrators. SCAM represents them in dealings with lawmakers, producers, publishers and distributors. It negotiates, collects and distributes their property rights, asserts their moral rights and negotiates their future interests.
- The Society of Authors of Graphic and Fine Arts (ADAGP).
- The Society of Authors of Visual Arts and Still Images (SAIF).

A second category derives from the recognition of neighboring rights, in particular for performing artists. These societies include ADAMI, the Society for the Administration of Performing Artists and Musicians Rights, and SPEDIDAM, the Society for the Receipt and Distribution of Dance and Music Performer's Rights. There are also producers' societies, such as the SCPP (Civil Union of Phonographic Producers) and the SPPF (Civil Union of French Phonogram Producers).

- ADAMI manages the right of actors, singers, musicians, conductors and dancers. It collects the sums owed individually to performing artists for the use of their recorded works. Some of the funds collected are earmarked for artistic creation.
- SPEDIDAM manages the rights of performing artists "whose names are not listed on the labels of phonograms or in the credits of audiovisual works".
- The SCPP collects and distributes remuneration on behalf of its members from users of phonograms and music videos, earmarking some of these funds for musical creation (as does the SPPF).

The third group of societies engage in the collective management of certain rights and are generally created by the above-mentioned societies, which pool their efforts and offer users a one-stop-shop for certain rights. They include SDRM (Society for the Management of Mechanical Reproduction Rights); the SPRÉ (Society for the Collection of Equitable Remuneration); COPIE France (Society for the Remuneration of Private Copying); SEAM (Society of Music Publishers and Creators); and SCPA (Civil Union of Associate Producers), acting for the SCPP (French Society of Phonograph Producers) in the copyright of telephone music-on-hold. Of these societies, the SPRÉ has an original structure. It was formed in accordance with stipulations of the Intellectual Property Code and is the only society in France authorized to collect "equitable remuneration" for all performing artists (singers and musicians) and record producers, without distinction as to nationality. Created in 1985, the SPRÉ consists of the four societies responsible for safeguarding the interests of beneficiaries of the right to remuneration and is divided into two colleges: the college of artists (ADAMI, SPEDIDAM) and the college of producers (SCPP, SPPF).

Amounts paid

In conclusion, subject to regulations discussed below, the amounts distributed will be analyzed. For the 2009-2011 period, which will be examined at greater length when analyzing the copyright dynamic in times of crisis, the first observable factor is a 12 per cent drop in the amount of copyright remuneration in 2011, although there is a 7.8 per cent increase over the entire period. More interesting is that neighboring rights or special regimes make the biggest gains, while "traditional" copyright lags behind. There are two reasons for this: neighboring rights collecting societies are growing and are probably improving coverage of their areas, whereas traditional copyright is making little progress. These factors are further discussed at the end of Chapter 3 in the context of the disappointing growth of core CIs in times of crisis.

Table 1.1. Remuneration collected by collecting and distributing societies for copyright and collectively managed neighboring rights

(in thousand euros)

Rights	2009	2010	2011	2012	△ 2012-2011
Total	**1,363,449**	**1,477,184**	**1,473,651**	**1,470,98**	**0.12%**
Copyright	**1,124,314**	**1,240,187**	**1,228,763**	**1,203,466**	**2%**
SACEM	762,309	819,620	819,430	802,600	2%
SACD	176,318	219,732	204,162	194,766	5%
Scam	88,291	97,050	99,200	91,140	2%
CFC	40,350	43,370	45,779	45,446	1%
ADAGP	23,445	25,296	26,736	28,795	+8%
Sofia	24,821	24,890	22,482	23,625	+5%
Scelf	4,338	5,331	5,400	5,800	+7%
SEAM	2,820	3,084	3,224	3,378	+5%
SAIF	650	920	1,541	1,135	28%
Saje	972	894	809	791	3%
Neighboring rights	**239,135**	**236,997**	**244,888**	**266,921**	**+9%**
Performing artists' societies					
ADAMI	58,171	58,335	65,493	64,686	1%
SPPF	19,794	22,775	22,310	27,847	+25%
Phonograph producers' societies					
SCPP	65,946	64,877	72,147	73,438	+2%
SPPF	19,794	22,775	22,310	27,847	+25%
Audiovisual producers' societies					
Procirep	35,110	30,690	27,700	26,300	5%
Angoa	25,360	23,200	18,700	32,000	+71%
ARP	830	1,150	938	1,017	+8%

Source: Societies that make direct payments to beneficiaries (natural or legal persons benefiting directly from the rights), DEPS, Ministry of Culture (2011, 2012, 2013, 2014).

1.3 Copyright policy

Copyright policy is set by the Ministry of Culture, which has a copyright department. The ministry has also established the Higher Council of Literary and Artistic Property (CSPLA). The CSPLA is an independent body responsible for advising the Minister of Culture and Communication on matters of literary and artistic property. It also monitors the exercise of and compliance with copyright and neighboring rights. Its creation by ministerial order on July 10, 2000 embodies the desire to keep abreast of changes in modes of consumption of cultural goods brought about by recent technological developments. Established by article 17 of the DADVSI law, the CSPLA is now recognized as an expert body, mediator and a source of proposals. It sets up specialized committees, such as the committee on the second life of works in the digital era and the committee for the indexing of works on the Internet, to analyse specific copyright issues in depth.

In recent years, there have been two major debates about the implementation of the copyright policy.

1.3.1 *HADOPI, the Lescure Report and the bill on creation*

The first debate concerns the downloading of cultural works and the attendant risks to copyright protection. This discussion was triggered by the HADOPI (Supreme Authority for the Distribution of Works and the Protection of Rights on the Internet) bill, named after the body that would be created to ensure the

implementation of the law if it was passed. The purpose of the bill was to resolve the issue of downloads of music, books and films. This law drew mainly on the 2008 Olivennes Law. The Olivennes Law sought to end illegal program downloads, which it considered responsible for the record industry's difficulties and for depriving creators of fair remuneration for their intellectual property rights. It accordingly sought to combat the piracy of works by improving the availability of legal offers.

To impede illegal downloads, the law set up a "graduated response" mechanism under the Supreme Administrative Authority. If the Internet access of Internet subscribers was used for piracy, the access holders would first be warned by e-mail. If they repeated the offense, they would receive a warning by registered mail and finally, if applicable, their Internet access would be canceled, although they would continue to pay for access, and/or the matter would be reported to the public prosecutor's office.

The principle of repeated reminders was intended to stop casual piracy and focus punitive action on actual fraudsters. Practices in other countries were held up as examples. However, this was a highly subjective interpretation on the part of the Ministry of Culture in that the punitive measures of other countries mainly target the creators of the software that allows illegal downloads. Several mechanisms have been established in other countries, some similar to the one adopted in France.

Apart from the debate analyzed at some length above, another problem which complicated this law was the European Parliament vote on April 10, 2008, inviting "the Commission and the Member States to avoid adopting measures conflicting with civil liberties and human rights and with the principles of proportionality, effectiveness and dissuasiveness, such as the interruption of Internet access". Moreover, ARCEP – the telecommunications regulator – had opined that the "graduated response" principle placed Internet service providers (ISPs) at odds with various existing legal instruments (for example, the obligation to "guarantee uninterrupted access to emergency services"). Finally, the law vested HADOPI with judicial powers in that it alone was empowered to institute legal proceedings and make judicial determinations in criminal matters. In fact, the real problem is as follows: given major technological developments, should attempts be made to control such developments through the "electronic social death" of an Internet user who is punished? Should film and music producers not instead be encouraged to devise new business models, of which some perfectly feasible ones already existed?

When a new President of the Republic came into office in April 2012, the new government decided to honor its electoral promises by closing down this mechanism, asserting that it had not been effective. This was a somewhat hasty judgment, given that awareness had been considerably raised during the debate of this law. The new government held that the law violated freedoms and was ineffective, since the number of prohibitions issued by HADOPI was much smaller than envisaged, precisely because there had been outreach. The somewhat peremptory assertion of principles was replaced by a more cautious approach, with the Lescure Commission (named after its chair) being charged with preparing new proposals for the second phase of cultural exception, including proposals relating to HADOPI. HADOPI had been charged with analyzing cultural industries and *"producing findings on how best to combat illegal practices"*. The Lescure Report to the President and to the Minister of Culture on May 13, 2013 contained many proposals for better protecting and adapting copyright with a view to beginning the second phase of cultural exception.

This consists in circumscribing a cultural policy that is respectful of the rights both of the public and of creators. The opportunities offered by digital technology must be used to promote public access to works, by augmenting the availability and quality of cultural offerings online. Furthermore, the digital exploitation of cultural works should allow for the fair remuneration of creators and an adequate level of funding for creative activities; such funding being indispensable for continued creativity.

Midway between these two objectives, the report was intended to consider how to adapt the rules and the implementation of intellectual property law to digital challenges. The legal offer of intangible cultural goods has never been so abundant, diverse and affordable, even if in some cases it struggled to meet the very high expectations of Internet users, as can be seen today with films and television series. The offer of legally available online content has to compete with illegal offers of content that is mainly free, easy to access, without digital rights management (DRM) protection and available in interoperable formats that are sometimes of better quality than the legal offer. Yet, as the report states, *"while it is futile to seek to eradicate illegal offers and harmful to stigmatize illegal users, it is equally unreasonable to use them as the exclusive reference: the competition they pose is massively unfair, since it earns nothing for the creators of works.*

Conversely, there is a need to build on the few advantages afforded by legal offers, such as the willingness of most users to follow the law (although such users need assistance in making a clear distinction between legal and illegal practices), the attention paid to creators (hence the need to guarantee fair remuneration for authors and artists for online exploitation), and secure and easy access to content".[1] To this end, the cultural policy should adopt three objectives: improve the online availability of cultural works; encourage the development of a range of innovative and culturally diverse services; and drive demand by encouraging the emergence of a user-friendly, affordable offer that respects users' rights.

The report dwelled at length on the need to change certain behaviors in a bid to boost offers and reduce friction between cultural and digital industries (develop quality offers, make media chronology more flexible, etc.). However, when it came to reconciling public freedom to use (for which it argued strongly) with the respect for copyright (whose legitimacy it emphasized), the report took a cautious approach, no doubt because the authors were aware that the report was expected to provide a solution to the abrogation of the HADOPI law without harking back to the fundamental principles of this law, which would be a Herculean task. The report further emphasized the importance of developing a public cultural digital service that would facilitate access to works and dispel the misapprehension that digital content should not benefit from the same assistance as culture.

Regarding the elimination of illegal practices, which highlights the core problem of respecting copyright, the report stated that "it is above all else the quality of the legal offer which will encourage the public to abandon illicit practices".[2] Since the range for policy maneuvers is limited, the report suggested the reduction of VAT (see form A12) in order to contribute to the reduction of prices and stimulate the conversion of public interest in the digital cultural offerings and, more generally, the application of lower rates to all online cultural services, which "would send a strong signal". The report also suggests improving the sharing of value added between publishers and creators, for example, by allowing greater transparency and fostering the development of self-published content, which would indeed be a radical solution to the problem. It recommended in particular that authors could derive greater benefit from the value created by the offer of additional services that followed the release of their works. This had become a key issue in the digitization of culture: the report proposed that the grant of copyright should be supplemented by incentives that enabled rightholders to benefit from the proceeds of digitization. More generally, the commission suggested that solutions should be sought through negotiated agreements, limiting the principle of mandatory collective solutions to a few sectors, based on a very carefully circumscribed approach (online music). Conversely, in the area of photography, the report held that the defense of photographic rights in the digital era would be less easily achieved by amending the Intellectual Property Code than by an educational approach that aimed for compliance with the laws already in force.

Nonetheless, on two points, the report was more proactive regarding public policy:

- The first is private copying, which it argued should be revisited, given that it has relied on fees levied on blank media and storage materials since 1985. Not only would it be appropriate to ensure more transparency in the use of the relevant fee, but it would also be necessary to review the tax base to take account of technological changes, such as cloud computing. The purpose is not to charge cloud-computing services as such, but to account, in the scales applied to physical media, for copies made from cloud computing services if they satisfy the definition of private copies. In fact, the report hints that it is online access, rather than the medium, which should serve as the basis for the system.

- The second is search engines: representatives of cultural industries believe that direct income from digital exploitation should be supplemented by another source of remuneration, which would be provided by search engines for their indexing and referencing, since web users use search engines to find cultural works they wish to access or download. The availability of a great deal of free cultural content, whether legal or illegal, is therefore a "raw material" which search engines exploit by providing a referencing service that generates considerable advertising revenue. However, as the report emphasized, levying this fee would give rise to fresh technical problems in addition to the necessary consideration of the effect on freedom of referencing and the right of quotation.

[1] Lescure Report Vol. 1, p. 15, available at http://www.ladocumentationfrancaise.fr/var/storage/rapports-publics/134000278.pdf.
[2] *Ibid*. p. 23.

The Lescure Report thus serves as a work program for the authorities, but for two minor differences: many of its proposals concern negotiations rather than legal or regulatory instruments, which leaves the two issues unresolved. The only legal instrument envisaged so far is the law on creation, which was passed by the National Assembly in October 2015, but whose known provisions are still fairly timorous. Nonetheless, the report envisages a reform of the graduated response mechanism, significant improvements in the remuneration of musical performing artists, improvement in exceptions for disabled persons and clarifications on the issue of the public domain.

1.3.2 *The debate about European Union plans*

France has always respectfully applied European Union directive,s such as the 2004 directive (2004/48) on the implementation of rights and the 2013 directive on the management of collective rights societies. Yet, many groups have observed that these directives tended more toward the Anglo-Saxon than the continental copyright system. While these disagreements have ebbed and the directive has appeared to be more balanced with time, they seem to be reviving in other forms. This was the case following a European Commission announcement in late December 2012 that promised a possible review of the European copyright framework. Several impact studies were conducted in 2013, and the intention was that by 2014 there would be *"a decision on the timeliness of making proposals for legislative reforms as a result of these studies"*. The topics that exercise stakeholders the most are obviously the regulation of exceptions in a completely altered digital environment. The Higher Council for Literary and Artistic Property took an interest in the issues, holding that the envisaged change in legislation was not likely to make for the smooth operation of the new system. The most delicate issue appears to be the fixing of exceptions, because it is the degree of these exceptions that determines the scope of copyright. Although the commission now seems to be prepared to accept exceptions for disabled persons or the enhancement of the public domain, educational exceptions have been directly challenged and the right of quotation and private copying also give rise to serious disagreement. In concrete terms, the disagreements center on whether to amend directive 2001/29 to make it closer in language to article 3362 of the CPI, which defines the scope of those whom rightholders can prosecute in a bid to prevent or end infringements of their artistic and literary property rights.

The disagreement is exacerbated because negotiators are simultaneously seeking a free trade agreement between the United States of America and the European Union in which the parties will undertake *"to maintain and promote a high level of intellectual property protection, including in the enforcement of the relevant rights"*. Some French observers consider this stance paradoxical because in their view, cultural exception should avoid such stances. The Minister of Culture and Communication informed all European culture ministers on April 4, 2014 that there was no need to modernize intellectual property law, that is, to envisage reforms in such a controversial area.

The collective management directive is often considered too detailed, but this is viewed as unavoidable. Moreover, there are doubts about how effectively it is applied.

The question is whether the law should be modernized. The Lescure Report partly resolved this disagreement by making a strong call for negotiation among stakeholders and by recommending that the number of regulatory mechanisms should either be limited or some of them simply redeployed. But this recommendation has found little favor, given the prospect of fresh directives and treaties.

Nonetheless, several scenarios for modernization suggest that it is in fact authors who risk seeing their interests ignored. For example, the ReLire project, which seeks to digitize works that are out of print, plans to institute a collective management system that would obviate the need for the author's prior agreement by introducing an *"opt-out"* mechanism requiring an author who does not wish his or her works to be digitized to state so expressly.

However, progress seems to be accelerating, with a large majority of the European Parliament voting on February 4, 2014 in favor of legislation allowing for simplified and harmonized collective copyright management in the music sector in Europe:

- Legal online music platforms like Spotify could secure pan-European licenses from a small number of collective copyright management societies, rather than having to negotiate with discrete organizations in each Member State.

- To guarantee a diversified music offer, specialist repertoires will not be neglected, since they will be licensed under the same terms as more popular repertoires.
- Authors will be remunerated within nine months of the end of the financial year in which the royalties for their works were collected.
- Rightholders will be more closely involved in the internal decision-making of collecting organizations.

In fact, these measures are consistent with many of the proposals made by the sectors concerned by copyright in France, but misunderstandings appear to persist. Here, as elsewhere, the impression in France is that behind the commission's initiative to overhaul mechanisms is the influence of giants that a nation cannot control on its own, precisely because there is no significant inter-state coordination. The clearest illustration of these fears is of course the huge debate triggered by the establishment of Netflix in Luxembourg, which is cited as evidence of the potential indirect threat to audiovisual creations in France and the attendant implications for rights.

1.3.3 *A burning issue: The quality of copyright management*

Established by the August 1, 2000 law and regulated by article L. 32113 of the Intellectual Property Code (CPI), the Standing Committee for the Oversight of Collecting and Distributing Societies reviews the accounts and management of civil societies managing the rights of authors, performing artists and producers. Each year, it must submit a report to Parliament, the Government and the membership of societies. The content of this report is not expressly stipulated in detail, which means that it may both present a general review and emphasize certain issues that are more directly relevant in light of the economic climate and of regulatory changes. In the last few years, it has largely addressed the concerns of authors regarding the oft-decried heavy fees these societies deduct, thereby reducing the amount of the royalties actually received. Four topics are worth a closer look:

- The Standing Committee had noted that, in most of the societies reviewed, the board of directors could only control the remuneration of the managing director. The Standing Committee generally recommends that at the very least, societies should also allow the remuneration of other managers apart from the managing director to be fixed by a small remunerations committee.
- The Standing Committee considered the wide disparities in the remuneration of men and women and the limited number of senior positions open to women to be unsatisfactory and called for further efforts.
- The Committee recently published proposals for improving the finances of these societies in light of the links among them; for example, between societies for performing artists, the SPRÉ and the society for remuneration for private copying (COPIE France). It also mentions the poor management of societies that do not call for bids for service provision and prefer to enter into direct agreements, which are in fact fairly onerous. An example is SACEM, which in 2013 finally agreed to consider such changes in its own management.
- Finally, the Standing Committee made certain recommendations for improvements to the system. Hence, in its 2012 report it recommends an investigation of rights relating to the audiovisual use of phonograms and cinematographic or audiovisual works, emphasizing in this instance the need to transcend individual controls.

2. The economic contribution of copyright industries in France

Three aggregates, or indicators, are often used to determine the role of copyright industries (CIs):

- The contribution of these industries to GDP (or to general value added corrected for the difference in taxes and subsidies), which enables the calculation of the value added of each of these industries and their aggregation.
- Employment, for which there are two possible approaches: full-time equivalent employment (FTE) and the number of persons employed, regardless of the duration of their employment, with the number of persons employed necessarily generating higher figures than FTE. FTE employment offsets work time differences and lends itself more easily to international comparisons.
- Exports: this variable is inherently essential because it guarantees the existence of a flow of autonomous expenditure around the country and therefore acts as a lever for growth. In creative industries, this importance is heightened in many countries whose cost competitiveness is relatively weak and who would therefore benefit from being competitive in terms of innovation. This is precisely the case for France. However, this focus on exports must of course be accompanied by an examination of the characteristics of imports, which will be shown to be higher than exports.

These three indicators offer a fairly accurate diagnosis of the position and role of copyright industries in the economy, and possibly the regulations and policies to be adopted to generate the expected effects. Thus, it will be observed that CIs have a positive exogenous and endogenous effect on growth: they are an exogenous source through their very high percentage share in the country's exports and the resulting advantage; they are an endogenous source because the significant mobilization of qualified human resources increases their mutual creativity.

This information can be supplemented from other sources or crosschecked with existing studies. This happens, for example, when changes in productivity, which is a lever or guarantee of long-term competitiveness, are analyzed. Such composite indicators will also be envisaged, mainly in Chapter 3, when discussing the dynamics of CIs.

The precise calculation of these aggregates, followed by their dynamic analysis in Chapter 3, raises two problems, one general and another more specific to France.

- The first problem is the nature of the link between specific activities and copyright. For some activities, such as literary publishing and music publishing and production, the link is evident and therefore all activities falling under the publishing of a work of music can be linked to copyright industries. This does not mean that the music is necessarily produced to attract copyright, but it means that the dynamic of the musical activity and copyright are mutually reinforcing. This link is looser for other activities and may even be indirect or nonexistent. Accordingly, the "copyright content" of the various industries must be weighted. Hence, a coefficient of 0 to 1 will be used, with 0 being a nonexistent link and 1 an automatic link. Bearing in mind the various areas of CIs, it might be thought that, on average, core industries will have a coefficient close to or equal to 1; that interdependent or non-dedicated support industries will, depending on the case, have low coefficients; and that partial industries will have coefficients ranging from 0 to 1.
- The second problem goes back to the debate between sectors and branches. Sectors are gatherings of businesses that have the same principal activity, but could have others, with only the main activity being considered when classifying a business under a specific sector. In France, the ESANE database has produced this information since 2008. Branches are collections of data on a simple activity or product, regardless of the business or the structure. The resulting data are therefore more homogenous than the data for sectors and are therefore more easily used for monitoring over time and for international comparisons through national accounts. In this study, the difficulty arises because the copyright coefficients are calculated according to sector and not according to branch. To obtain these coefficients, the weighted average of copyright coefficients for each of the different sectors contributing to a given branch must be found for

each branch. The weighting coefficient is then the relative weight of the value added of the sector in the value added of the given branch.

2.1 Prerequisite: Calculation of the weighting coefficients of branches in copyright

2.1.1 *Choosing CIs: Core, interdependent, partial and non-dedicated support*

In a very general way, the list of industries selected corresponds to the list given in WIPO's *Guide on Surveying the Economic Contribution of Copyright Industries*. There are a few changes that concern the listing under certain categories, based on the modification of the statistical tool. Where difference between the WIPO guide and the French system exist, an effort has been made to avoid departing too much from the guide so that comparisons can also be made with French studies of cultural sectors, of which there have been a good number in the last few years. These are exceptional cases which affect less than 3 per cent of the 149 sectors surveyed. This report will provide the codes used by ESANE, the statistical database produced for this purpose by INSEE.

2.1.1.1 *Core industries*

As previously stated, these are industries that produce copyright-protected goods and services, with production encompassing distribution and marketing functions in order to avoid creating a difference between activities which are in fact completely interdependent. The 42 sectors selected – listed here with their ESANE codes (Table 2.1.a) – cover the 9 groups indicated in the WIPO guide. Problems of interpretation may arise for the following reasons:

- because of the low disaggregation of the figures provided by ESANE for telecommunications, this activity has been placed under non-dedicated support activities;
- it is difficult to place all activities relating to libraries and archives under core industries and so, in keeping with a French statistical tradition, they will be placed alongside museum activities in partial industries (admittedly with a high copyright coefficient); and
- the activities of copyright collecting societies are not listed as such in INSEE, and listing them separately would lead to redundant calculation with the value added of core activities.

Table 2.1.a. Identification of core CIs, ESANE database of INSEE

1811Z	Printing of newspapers
1813Z	Pre-press and pre-media services
1820Z	Reproduction of recorded media
4651Z	Wholesale (intercompany trade) of computers, peripheral computer equipment and software
4652Z	Wholesale sale (intercompany trade) of electronic components and equipment and telecommunications
4741Z	Retail sale of computers, peripheral units and software in specialized stores
4761Z	Retail sale of books in specialized stores
4762Z	Retail sale of newspapers and stationery in specialized stores
4763Z	Retail sale of music and video recordings in specialized stores
5811Z	Book publishing
5812Z	Publishing of directories and mailing lists
5813Z	Publishing of newspapers
5814Z	Publishing of journals and periodicals
5819Z	Other publishing activities
5821Z	Publishing of computer games
5829A	System and network software publishing
5829B	Publishing of software, development tools and languages
5829C	Publishing of software applications
5911A	Production of motion pictures for television and television programmers
5911B	Production of institutional and promotional motion pictures
5911C	Production of motion pictures for cinema
5912Z	Motion picture, video and television programmer post-production activities
5913A	Motion pictures for cinema distribution
5913B	Video publishing and distribution
5920Z	Sound recording and music publishing activities
6010Z	Radio broadcasting
6020A	Broadcasting on general channels
6020B	Broadcasting of specialized channels
6201Z	Computer programming activities
6202A	Hardware and software consultancy
6203Z	Computer facilities management activities
6209Z	Other information technology and computer service activities
6391Z	News agency activities
7311Z	Advertising agencies
7312Z	Media representation
7410Z	Specialized design activities
7420Z	Photographic activities
7430Z	Translation and interpretation activities
9001Z	Performing arts
9002Z	Support activities to performing arts
9003	Artistic creation
9004Z	Operation of arts facilities

2.1.1.2 *Interdependent industries*

The interdependent activities described in the WIPO guide and shown in Table 2.1.b are indeed consistent with the manufacture, distribution and sale of equipment and media used by protected works. However, this relationship is not exclusive, which is why these activities have been separated from the core industries and must be given specific weighting coefficients. A repair function is added. Although it is not specified in the guide, it is clearly described in the ESANE database and seems to be a logical extension of the sectors being considered and therefore those affected by copyright industries.

Table 2.1.b. Identification of interdependent CIs, INSEE's ESANE database

1712Z	Manufacture of paper and paperboard
2611Z	Manufacture of electronic components
2612Z	Manufacture of loaded electronic boards
2620Z	Manufacture of computers and peripheral equipment
2630Z	Manufacture of communication equipment
2640Z	Manufacture of consumer electronics
2670Z	Manufacture of optical instruments and photographic equipment
2680Z	Manufacture of magnetic and optical media
2899A	Manufacture of printing machinery
3220Z	Manufacture of musical instruments
4743Z	Retail sale of audio and video equipment in specialized stores
4763Z	Retail sale of music and video recordings in specialized stores
7722Z	Renting of video tapes and disks
9511Z	Repair of computers and peripheral equipment
9512Z	Repair of communication equipment
9521Z	Repair of consumer electronics

2.1.1.3 *Partial copyright industries*

Partial industries – 43 in number (see Table 2.1.c) – are activities only a part of which falls under copyright, provided that this part is moderately large. This is addressed by the introduction of weighting coefficients. The 10 groups listed fall within their corresponding sale and distribution activities, as indeed is the case for the core industries, but they can be a little difficult to understand because the order followed here is the ESANE model: textiles and clothing, leather, wood, wall covering, sandpaper and ceramics, games and toys, jewels and jewelry, architecture and engineering, and museums and libraries. This is true for libraries that are logically classified with museums.

Table 2.1.c. Identification of partial CIs, ESANE database, INSEE

1392Z	Manufacture of made-up textile articles, except apparel
1411Z	Manufacture of leather clothes
1412Z	Manufacture of workwear
1413Z	Manufacture of other outerwear
1414Z	Manufacture of underwear
1420Z	Manufacture of articles of fur
1431Z	Manufacture of knitted and crocheted hosiery
1512Z	Manufacture of luggage, handbags and the like, saddlery and harness
1520Z	Manufacture of footwear
1621Z	Manufacture of veneer sheets and wood-based panels
1622Z	Manufacture of assembled parquet floors
1623Z	Manufacture of other builders' carpentry and joinery
1624Z	Manufacture of wooden containers
1629Z	Manufacture of various wooden objects – manufacture of cork, straw and plaiting objects
1711Z	Manufacture of pulp
1722Z	Manufacture of household and sanitary goods and of toilet requisites
1723Z	Manufacture of paper stationery
1724Z	Manufacture of wallpaper
1729Z	Manufacture of other articles of paper and paperboard
1814	Binding and related activities
2319Z	Manufacture and processing of other glass, including technical glassware
2341Z	Manufacture of ceramic household and ornamental articles
2349Z	Manufacture of other ceramic products
2370Z	Cutting, shaping and finishing of stone
2599A	Manufacture of household fabricated metal articles
31	Manufacture of furniture
3212Z	Manufacture of jewelry and related articles
3213Z	Manufacture of imitation jewelry and related articles
3240Z	Manufacture of games and toys
4624Z	Wholesale (intercompany trade) of leathers and skins
4642Z	Wholesale (intercompany trade) of apparel and shoes
4648Z	Wholesale (intercompany trade) of watches and jewelry
4753Z	Retail sale of carpets, rugs, wall and floor coverings in specialized stores
4765Z	Retail sale of games and toys in specialized stores
4771Z	Retail sale of clothing in specialized stores
4772A	Retail sale of footwear
4772B	Retail sale of fine leather goods and of travel articles
4777Z	Retail sale of watches and jewelry in specialized stores
7111Z	Architectural activities
7112B	Engineering, technical studies
910	Libraries, archives, museums and other cultural activities
9102Z	Museums activities
9103	Operation of historical sites and buildings and similar visitor attractions
9104	Botanical and zoological gardens and nature reserves activities

2.1.1.4 *Non-dedicated support copyright industries*

The 47 non-specialist non-dedicated support industries partly help with the dissemination and distribution of protected works, but were not previously considered in the absence of a direct and exclusive link with such partial and core protected works. Thus, this category includes major crosscutting business activities (wholesale and retail, transportation and telecommunications), which will make for a careful attribution of their weighting coefficients, because their accounting base is often very wide. There are no particular difficulties with these lists and they match well with that of the WIPO guide (p. 80) and that selected from the ESANE database (Table 2.1.d.)

Table 2.1.d. Identification of non-dedicated support CIs, INSEE's ESANE database

4611Z	Agents involved in the sale of agricultural raw materials, live animals, textile raw materials and semi-finished goods
4612A	Automotive fuel buying groups
4612B	Other agents involved in the sale of fuels, ores, metals and industrial chemicals
4613Z	Agents involved in the sale of timber and building materials
4614Z	Agents involved in the sale of machinery, industrial equipment, ships and aircraft
4615Z	Agents involved in the sale of furniture, household goods, hardware and ironmongery
4616Z	Agents involved in the sale of textiles, clothing, fur, footwear and leather goods
4617A	Food buying groups
4617B	Other agents involved in the sale of food, beverages and tobacco
4618Z	Agents specialized in the sale of other particular products
4619	Agents involved in the sale of a variety of goods
462	Wholesale of agricultural raw materials and live animals
463	Wholesale of food, beverages and tobacco
464	Wholesale of household goods
466	Wholesale of other machinery, equipment and supplies
467	Other specialized wholesale
469	Non-specialized wholesale trade
471	Retail sale in non-specialized stores
472	Retail sale of food, beverages and tobacco in specialized stores
4751Z	Retail sale of textiles in specialized stores
4752Z	Retail sale of ironmongery, paints and glass
4764Z	Retail sale of sporting equipment in specialized stores
4778C	Other sundry specialized retail sale
4779	Retail sale of second-hand goods in stores
478	Retail sale via stalls and markets
4791	Retail sale via mail order houses or via Internet
4799	Other retail sale not in stores, stalls or markets
4920Z	Freight rail transport
4941A	Interurban freight transport by road
4941B	Proximity freight transport by road
5121Z	Freight air transport
5210B	Non-refrigerating warehousing and storage
5221Z	Service activities incidental to land transportation
5222Z	Service activities incidental to water transportation
5223Z	Service activities incidental to air transportation

Table 2.1.d. Identification of non-dedicated support CIs, INSEE's ESANE database (continued)

5224A	Harbor cargo handling
5224B	Non-harbor cargo handling
53	Postal and courier activities
5320Z	Other postal and courier activities
6110Z	Wired telecommunications activities
6120Z	Wireless telecommunications activities
6130Z	Satellite telecommunications activities
619	Other telecommunications activities
6190Z	Other telecommunications activities
6312Z	Web portals
7911Z	Travel agency activities
7912Z	Tour operator activities

2.1.2 *Choosing copyright coefficients by base sector*

2.1.2.1 *Copyright coefficients in core industries*

If one of the selected activities clearly indicates the existence of copyright, the activity is considered to have an impact on the entire economy as a part of the copyright industries. This is true for core CIs. However, the coefficient of some of these activities was partly reduced, taking into account both the information provided by the operators and the definitions of INSEE (see Table 2.2.a).

– Sector 1813Z: Pre-press and pre-media services, which INSEE considers to comprise operations preceding the printing of any document (e.g. administrative, commercial or educational), have a very distant and almost nonexistent relationship with copyright; the coefficient is therefore reduced to 0.5.

– Sector 1820Z: Reproduction of recorded media, which corresponds to the transfer of images and sound files regardless of their origin or destination, concerns sources that are much broader than those giving rise to copyright. It is therefore important to make the same correction as above in this case: the coefficient is reduced to 0.5.

– Three other sectors: 6201Z, Computer programming activities; 6202A, Advice on computer systems; and 6203Z, Computer facilities management activities were slightly undervalued because it is difficult still, in light of the INSEE definitions, to claim that any computer work gives rise to copyright. Accordingly, computer orders placed in France by the central or local government authorities do not automatically lead to recognition of copyright. Their coefficient is therefore 0.6, after taking the related branches into account, because their activities are closely related to copyright or non-copyright activities.

Table 2.2.a. Copyright coefficients: Core CIs

1811Z	Printing of newspapers	1.00
1813Z	Pre-press and pre-media services	0.50
1820Z	Reproduction of recorded media	0.50
4651Z	Wholesale (intercompany trade) of computers, peripheral computer equipment and software	1.00
4652Z	Wholesale sale (intercompany trade) of electronic components and equipment and telecommunications	1.00
4741Z	Retail sale of computers, peripheral units and software in specialized stores	1.00
4761Z	Retail sale of books in specialized stores	1.00
4762Z	Retail sale of newspapers and stationery in specialized stores	1.00
4763Z	Retail sale of music and video recordings in specialized stores	1.00
5811Z	Book publishing	1.00
5812Z	Publishing of directories and mailing lists	1.00
5813Z	Publishing of newspapers	1.00
5814Z	Publishing of journals and periodicals	1.00
5819Z	Other publishing activities	1.00
5821Z	Publishing of computer games	1.00
5829A	System and network software publishing	1.00
5829B	Publishing of software, development tools and languages	1.00
5829C	Publishing of application software	1.00
5911A	Production of motion pictures for television and television programmers	1.00
5911B	Production of institutional and promotional motion pictures	1.00
5911C	Production of motion pictures for cinema	1.00
5912Z	Motion picture, video and television programmer post-production activities	1.00
5913A	Motion pictures for cinema distribution	1.00
5913B	Video publishing and distribution	1.00
5920Z	Sound recording and music publishing activities	1.00
6010Z	Radio broadcasting	1.00
6020A	Broadcasting from general channels	1.00
6020B	Publishing of specialized channels	1.00
6201Z	Computer programming activities	0.60
6202A	Hardware and software consultancy	0.60
6203Z	Computer facilities management activities	0.60
6209Z	Other information technology and computer service activities	1.00
6391Z	News agency activities	1.00
7311Z	Advertising agencies	1.00
7312Z	Media representation	1.00
7410Z	Specialized design activities	1.00
7420Z	Photographic activities	1.00
7430Z	Translation and interpretation activities	1.00
9001Z	Performing arts	1.00
9002Z	Support activities to performing arts	1.00
9003	Artistic creation	1.00

2.1.2.2 *Copyright coefficients of interdependent industries*

This reasoning no longer holds true for interdependent activities because they concern the production, manufacture and sale of materials partly designed to facilitate the production or use of works and other protected elements (see Table 2.2.b). An example is activities related to paper, which fall under various groups. The estimate of the "copyright" share of the paper sector could be based on the apportioning of graphic uses for paper (press paper and printing/writing paper), and parceling, conditioning and toilet paper. However, data from COPACEL (the French union of paper, paperboard and cellulose, www.copacel.fr) show the total production values for these four groups, which, among other things, makes it possible to ascribe a usage rate of nearly 50 per cent to graphic uses (2,297/4,637 in 2009). Unless additional indications are provided, the codes associated with paper can thus be based on this percentage. The alternative is to modulate it separately according to the stage of the sector (because the farther back the analysis goes, the less the share of copyright). Thus, for printing machines this coefficient falls from 0.55 to 0.3 because this production undoubtedly depends on the estimated total size of the market and thus on the economic situation rather than on a specific use. This correction is even more justified in this instance because the share of graphic uses since 2009 seems to be falling.

More generally, the reference copyright coefficient is 0.5. It rises to 0.9 when the proximity with the activity giving rise to copyright strongly increases (sale of musical instruments) and falls to 0.3 in the opposite case (manufacture of magnetic media). The coefficient of 0.9 – the highest here – is primarily explained by the fact that national production is directed towards the needs of professional artists, whereas imports concern the general public. However, the proximity to copyright is obviously stronger for the former than for the latter.

Table 2.2.b. Copyright coefficients: Interdependent CIs

1712Z	Manufacture of paper and paperboard	0.5
2611Z	Manufacture of electronic components	0.5
2612Z	Manufacture of loaded electronic boards	0.5
2620Z	Manufacture of computers and peripheral equipment	0.5
2630Z	Manufacture of communication equipment	0.5
2640Z	Manufacture of consumer electronics	0.8
2670Z	Manufacture of optical instruments and photographic equipment	0.3
2680Z	Manufacture of magnetic and optical media	0.3
2899A	Manufacture of printing machinery	0.3
3220Z	Manufacture of musical instruments	0.9
4743Z	Retail sale of audio and video equipment in specialized stores	0.8
4763Z	Retail sale of music and video recordings in specialized stores	0.8
7722Z	Renting of video tapes and disks	0.8
9511Z	Repair of computers and peripheral equipment	0.5
9512Z	Repair of communication equipment	0.3
9521Z	Repair of consumer electronics	0.3

2.1.2.3 *Copyright coefficients of partial industries*

The *pro-rata* calculation process is different for partial activities. In general, they should be estimated directly, based on an examination of the activities under consideration. Here, the direct component in "copyright or similar protection" must be used, rather than the *prima facie* cultural or other feature of the activity (see Table 2.2.c). In France, the General Inspectorates of the Ministries of Finance and Culture produced an important document in 2013 that deals in part with this issue. The two approaches are a little different (partially cultural on the one hand and partially copyright on other), so there is a mirror effect that can be exploited to underline similarities or differences.

It is worth noting first that a significant number of activities fall under textiles, apparel, shoes, leather, etc. If there are any designs, marks and copyright, these activities are considered to be *subject to the impact* of copyright, which means that they are ascribed a coefficient of 0.6, with the exception of textiles, whose definition is much broader here (0.5). This proportion is logical: it in fact means that half of the production in this field will benefit from copyright, the outstanding point at issue being whether all producers actually exercise their rights.

Paper-related activities are similarly treated, but with an added restriction because many paper uses in this context do not fall under copyright, and hence the reduction in their coefficients from 0.6 to 0.5. For woodworking activities, the coefficient is reduced because it appears that many operations only produce for the domestic market, according to the stakeholders in the sectors concerned, hence the coefficient of 0.3. Conversely, the coefficient increases for the jewelry, games and toys group (0.8), except for imitation jewelry, which in practice can be separately identified (0.6). In sectors where the coefficient is fixed at 0.8, the link with copyright is therefore strong, apart from some generic productions. The "glass ceramic stone" group is more similar to wood but nonetheless has a higher coefficient (0.5), in particular the stone-cutting sector (0.8). Household articles have a rather high coefficient because they correspond in general to an extremely highly developed brand approach that can assert copyright (0.8). This is somewhat less true for the production of other mechanical objects and items of furniture (0.6).

Regarding trade in such products, the approach is to determine coefficients that mirror production coefficients. For wholesale, this coefficient would be 0.6. However, for the retail trade, this coefficient is slightly higher because this activity is downstream of the distribution of the best-branded or most targeted products, hence a coefficient of 0.8. This difference is normal because wholesalers rely much more on indicators of weight, speed and economies of scale and size (thus associating products which may not have the same relationship to copyright), whereas the retail trades exploit the promotion of "branded" products, etc. much more. In addition, coefficients for wholesale are always lower than for retail.

For architecture, the coefficient is 0.9, unlike in other studies that opt for unity. However, it shoulbe be noted that some of the work is repair and maintenance, not creation, contrary to an assumption that tends to conflate architectural activities with purely cultural industries. For the purposes of comparison, the 2013 joint study by the Inspectorate of Taxes and the Inspectorate of Culture used a coefficient of 1. This coefficient falls to 0.8 for engineering and studies. This precaution is taken because the volume of activity is very high in this area and it is known that much of this work is maintenance or repair, for which the intervention of an architect is not always necessary (in France, these limits are jointly determined by the volume and the purpose of the work).

For libraries and museums, the coefficient is not one, but 0.8, although it is 1 in some studies on culture. This reduction is because, while the activities of museums and libraries are often related to production or the defense of copyright, a considerable part of these activities is increasingly for sociocultural outreach. That is why the coefficient was reduced after consultation with the Louvre and the Strasbourg, Lille and Bayonne museum services.

This coefficient also applies to the 9103 sectors, "Operation of historical sites and buildings and similar visitor attractions", and the 9104 sectors, "Botanical and zoological gardens and nature reserves activities". There are two reasons for this. Firstly, in France, a certain number of these elements could have been classified under museums or otherwise, since this results from choices often related to the apportioning of responsibility between the State and local councils. Thus, the Castle of Versailles is considered a museum, whereas almost all of the castles within the jurisdiction of general or municipal councils are considered monuments. Secondly, the promotion of the intellectual property of these various sites becomes a central resource that is comparable to import duties, if not to public subsidies received. This is increasingly apparent in the status of shops, concession agreements and publishing contracts. Finally, it is worth mentioning – though there is nowhere near as much debate as in the previous two cases – that, quite paradoxically, the amount of these sums is in fact very low. Leisure parks are not included in this case, since they cannot be considered alongside natural or historic sites.

Table 2.2.c. Copyright coefficients: Partial CIs

1392Z	Manufacture of made-up textile articles, except apparel	0.5
1411Z	Manufacture of leather clothes	0.6
1412Z	Manufacture of workwear	0.6
1413Z	Manufacture of other outerwear	0.6
1414Z	Manufacture of underwear	0.6
1420Z	Manufacture of articles of fur	0.8
1431Z	Manufacture of knitted and crocheted hosiery	0.6
1439Z	Manufacture of other knitted and crocheted apparel	0.6
1512Z	Manufacture of luggage, handbags and the like, saddlery and harness	0.9
1520Z	Manufacture of footwear	0.6
1621Z	Manufacture of veneer sheets and wood-based panels	0.3
1622Z	Manufacture of assembled parquet floors	0.3
1623Z	Manufacture of other builders' carpentry and joinery	0.3
1624Z	Manufacture of wooden containers	0.3
1629Z	Manufacture of various wooden objects – manufacture of cork, straw and plaiting objects	0.3
1711Z	Manufacture of pulp	0.5
1722Z	Manufacture of household and sanitary goods and of toilet requisites	0.5
1723Z	Manufacture of paper stationery	0.5
1724Z	Manufacture of wallpaper	0.5
1729Z	Manufacture of other articles of paper and paperboard	0.5
1814	Binding and related activities	0.5
2319Z	Manufacture and processing of other glass, including technical glassware	0.5
2341Z	Manufacture of ceramic household and ornamental articles	0.5
2349Z	Manufacture of other ceramic products	0.5
2370Z	Cutting, shaping and finishing of stone	0.8
2599A	Manufacture of household fabricated metal articles	0.8
2599B	Manufacture of other fabricated metal articles apart from machinery and equipment	0.6
31	Manufacture of furniture	0.5
3212Z	Manufacture of jewelry and related articles	0.8
3213Z	Manufacture of imitation jewelry and related articles	0.6
3240Z	Manufacture of games and toys	0.8
4624Z	Wholesale (intercompany trade) of leathers and skins	0.5
4642Z	Wholesale (intercompany trade) of apparel and shoes	0.5
4648Z	Wholesale (intercompany trade) of watches and jewelry	0.5
4753Z	Retail sale of carpets, rugs, wall and floor coverings in specialized stores	0.6
4765Z	Retail sale of games and toys in specialized stores	0.6
4771Z	Retail sale of clothing in specialized stores	0.6
4772A	Retail sale of footwear	0.6
4772B	Retail sale of fine leather goods and of travel articles	0.6
4777Z	Retail sale of watches and jewelry in specialized stores	0.6
7111Z	Architectural activities	0.9
7112B	Engineering, technical studies	0.8
910	Libraries, archives, museums and other cultural activities	0.8
9102Z	Museums activities	0.8
9103	Operation of historical sites and buildings and similar visitor attractions	0.8
9104	Botanical and zoological gardens and nature reserves activities	0.8

2.1.2.4 *The copyright coefficients of non-dedicated support industries*

The last type of activity, non-dedicated support activities, is the most difficult to deal with and can give rise to significant modifications in the calculation of the weight of copyright industries. These are unspecialized activities which facilitate the distribution, sale, broadcast and communication of works and other protected materials, provided they have not already been included under the preceding types of activities. The real difficulty therefore springs from the considerable scope of these industries and any lack of restraint in determining weighting coefficients can radically alter the final data. Subject to other explanations, the guiding principle of the study was to ensure that the weighting of these activities should not be greater than that of the core activities. In fact, there is a multiplier effect with these activities, but it is advisable to avoid performing a modern miracle of the loaves, which, while heartwarming, could cast doubt on the accuracy of the figures.

This group concerns sales, transportation and distribution, these three functions being construed as broadly as possible because they derive from crosscutting economic data.

For sales activities involving agents, wholesale and retail, the hierarchy used above to distinguish between retail (the impact of which is greater), wholesale and agents will be maintained. However, the key variable here is the coefficient, which is essential in this case, and weighting is calculated in hundredths and not in tenths. Thus, some wholesale activities will be assigned a coefficient of 0.03 per cent whereas, previously, they had a coefficient of 0.3 per cent. This is because the categories being examined are very broad and the share of copyright activities should not be overestimated. For example, a coefficient of 0.01 was assigned to "agents involved in the sale of agricultural raw materials, live animals, textile raw materials and semi-finished goods", but a coefficient of 0.03 was assigned to "agents involved in the sale of machinery, industrial equipment, ships and aircraft". Conversely, agents involved in the sale of specific products may be assigned a coefficient of up to 0.05. More generally, the more specific the commercial function, the higher the coefficient.

For transportation, bearing in mind that this excludes land transport of passengers, the coefficient assigned is 0.08. This coefficient is the same for telecommunications in order to emphasize the growing share of the digital transmission of cultural and copyright products.

Table 2.2.d. Copyright coefficients: Non-dedicated support CIs

4611Z	Agents involved in the sale of agricultural raw materials, live animals, textile raw materials and semi-finished goods	0.03
4612A	Automotive fuel buying groups	0.01
4612B	Other agents involved in the sale of fuels, ores, metals and industrial chemicals	0.03
4613Z	Agents involved in the sale of timber and building materials	0.03
4614Z	Agents involved in the sale of machinery, industrial equipment, ships and aircraft	0.03
4615Z	Agents involved in the sale of furniture, household goods, hardware and ironmongery	0.05
4616Z	Agents involved in the sale of textiles, clothing, fur, footwear and leather goods	0.20
4617A	Food buying groups	0.01
4617B	Other agents involved in the sale of food, beverages and tobacco	0.01
4618Z	Agents specialized in the sale of other particular products	0.10
4619	Agents involved in the sale of a variety of goods	0.05
462	Wholesale of agricultural raw materials and live animals	0.01
463	Wholesale of food, beverages and tobacco	0.03
464	Wholesale of household goods	0.05
466	Wholesale of other machinery, equipment and supplies	0.05
467	Other specialized wholesale	0.05
469	Non-specialized wholesale trade	0.03
471	Retail sale in non-specialized stores	0.10

Table 2.2.d. Copyright coefficients: Non-dedicated support CIs

472	Retail sale of food, beverages and tobacco in specialized stores	0.10
473Z	Retail sale of textiles in specialized stores	0.30
474Z	Retail sale of ironmongery, paints and glass	0.30
475Z	Retail sale of sporting equipment in specialized stores	0.3
477C	Other sundry specialized retail sale	0.3
4779	Retail sale of second-hand goods in stores	0.01
478	Retail sale via stalls and markets	0.01
4791	Retail sale via mail order houses or via Internet	0.01
4799	Other retail sale not in stores, stalls or markets	0. 01
4920Z	Freight rail transport	0.08
4941A	Interurban freight transport by road	0.08
4941B	Proximity freight transport by road	0.08
5121Z	Freight air transport	0.08
5210B	Non-refrigerating warehousing and storage	0.08
5221Z	Service activities incidental to land transportation	0.08
5222Z	Service activities incidental to water transportation	0.08
5223Z	Service activities incidental to air transportation	0.08
5224A	Harbor cargo handling	0.08
5224B	Non-harbor cargo handling	0.08
53	Postal and courier activities	0.80
5320Z	Other postal and courier activities	0.08
6110Z	Wired telecommunications activities	0.08
6120Z	Wireless telecommunications activities	0.08
6130Z	Satellite telecommunications activities	0.08
619	Other telecommunications activities	0.08
6190Z	Other telecommunications activities	0.08
6312Z	Web portals	0.8
7911Z	Travel agency activities	0.8
7912Z	Tour operator activities	0.8

2.1.3 *The transition to copyright coefficient according to branches*

The first part of this chapter has helped to determine a copyright coefficient for each elementary sector. The second part will consist in determining a copyright coefficient for each branch, which is a different matter. The main rationale for this second part is that copyright is has almost all been identified with specific sectors of activity, and therefore in terms of businesses, depending on the main activity. However, any determination of the contribution of copyright must use national aggregates and must therefore consider the exercise in terms of branches, which include data from sectors that benefit from copyright and sectors that do not. Therefore, it is necessary for each branch first to identify the relative share of sectors in which copyright is a feature, and next multiply these relative weights by the corresponding copyright coefficient. If, in a given branch, there is a sector 1 protected by copyright 0.8 and ranked at 40 per cent and a sector 2 not protected by copyright (coefficient equal to zero) and ranked at 60 per cent, the final copyright weight for this branch will be calculated at 0.32 (0.8*40%+0*60%). This yields a weighted coefficient that will make it possible to determine the contribution of copyright for each branch, whether it is measured in terms of value added, employment or exports. This is consistent with the practice of the French Ministries of Culture and the Economy, which determine the relative weight of copyright and non-copyright sectors for specific branches.

The following example (see Table 2.3.a.) will clarify the point. The textile branch encompasses several sectors, of which only one has been identified as a copyright industry: manufacture of made-up textile articles, except apparel. In employment terms, this sector accounts for 29 per cent of the branch (12,151 jobs out of 42,478), which means that it contributes 29 per cent of the size of the branch in relation to the variable. Based on these figures, the following scenario will apply.

Table 2.3.a. Methodology of the sector-branch transition

Code	Code	Name of branch/sector	Value	Relative weight (%)	Final coefficient
A88	13	Textiles	42,478		0.29
A732	7111Z	Manufacture of made-up textile articles, except apparel	12,151	0.29	

However, this cannot be the final result because, of course, even if a CI is involved, its copyright potential is not as high as for other sectors. The coefficient happens to have been fixed at 0.5, meaning that its final weight will only be 0.145 (see Table 2.3.b).

Table 2.3.b. Methodology of the sector-branch transition

Code	Code	Name of branch/sector	Value	Relative weight	Copyright coefficient	Coefficient
A88	13	Textiles	42,478			0.145
A732	7111Z	Manufacture of made-up textile articles, except apparel	12,151	0.29	0.5	

The following formula was used:

$$\text{Share of branch attributable to CIs} = [C_{trans} * C_{draut.}]$$

The analysis is enhanced by three factors:

– Firstly, this system, which is based on weighting, changes with the nature of the aggregate being considered because the contributions of sectors to a specific branch have different weights, depending on whether value added, employment or even exports are considered. There will therefore be coefficients for the transition to sector/branch for each aggregate.

– If several CI sectors fall under the same branch, they should be treated separately because each refers to a different copyright coefficient. For example, branch 71, which includes three sectors – architectural activities, engineering activities, and technical monitoring and analysis activities – of which only two, architectural activities and engineering activities, are identified as CIs. Since they have different levels of copyright activity, the following formula will be applied:

$$\text{Share of branch attributable to CIs} = [C_{trans}[\text{Arch.}] * C_{draut}[\text{Arch.}] + [C_{trans}[\text{Eng.}] * C_{draut}\{\text{Eng.}]$$

– These coefficients should normally change each year, even if the distortion of the productive economy generally has a medium- or even long-term effect. It is difficult to reach that point, especially as basic modifications, however slight, can occur. Given that the study period is 1999-2012, the reference year is that for which data was confirmed to be available at the time the study began, that is, in 2011.

Table 2.4.a explains how this coefficient is calculated for core CIs – value added:

- The first two columns identify the branches and sectors by showing who benefits from copyright. Thus, the printing branch includes sub-sectors 1811, Printing and reproduction of recorded media; A813, Pre-press services; and 1820, Reproduction of recorded media.

- Column 3 shows the value added for the corresponding copyright branches and sectors. 100 for 1811, Printing and reproduction of recorded media; 802 for A813, Pre-press and pre-media services; and 98 for 1820, Reproduction of recorded media.
- Column 4 determines the relative weight of the various sectors depending on the size (value added in this case) in light of the corresponding data in Column 2. For the printing branch: 0.025 for 1811, Printing and reproduction of recorded media; 0.2 for A813, Pre-press and pre-media services; and 0.024 for 1820, Reproduction of recorded media.
- Column 5 shows the copyright coefficient of this activity. For the printing branch: 0.025 for 1811, Printing and reproduction of recorded media; 0.2 for A813, Pre-press and pre-media services; and 0.024 for 1820, Reproduction of recorded media.
- Column 6 shows the product of these two coefficients. For the printing branch: 0.025 for 1811, Printing and reproduction of recorded media; 0.2 for A813, Pre-press and pre-media services; and 0.024 for 1820, Reproduction of recorded media.
- Column 7 gives the sum of the coefficients of the sectors concerned for a given branch, which is a composite coefficient. For the printing branch: 0.14.

Table 2.4.a. Composite or CI coefficients per branch – core CIs

1. Code	2. Name of branch and corresponding sectors	3. Value added	4. % of sector	5. % CI	6. =4*5	7. Coeff. CI branch
18	**Printing and reproduction of recorded media**	**3,991**				**0.14**
1811Z	Printing of newspapers	100	0.025	1	0.025	
1813Z	Pre-press and pre-media services	802	0.2	0.5	0.1	
1820Z	Reproduction of recorded media	98	0.024	0.5	0.012	
46	**Wholesale trade, except of motor vehicles and motorcycles**	**98,901**				**0.045**
4651Z	Wholesale (intercompany trade) of computers, peripheral computer equipment and software	2,538	0.025	1	0.025	
4652Z	Wholesale sale (intercompany trade) of electronic components and equipment and telecommunications	1,847	0.02	1	0.02	
47	**Retail trade, except of motor vehicles and motorcycles**	**77,740**				**0.034**
4741Z	Retail sale of computers, peripheral units and software in specialized stores	852	0.01	1	0.01	
4761Z	Retail sale of books in specialized stores	468	0.006	1	0.006	
4762Z	Retail sale of newspapers and stationery in specialized stores	753	0.01	1	0.01	
4763Z	Retail sale of music and video recordings in specialized stores	64	0.008	1	0.008	
58	***Publishing activities***	***10,747***				***0.88***
5811Z	Book publishing	1,345	0.125	1	0.125	
5812Z	Publishing of directories and mailing lists	14	0.001	1	0.001	
5813Z	Publishing of newspapers	1,881	0.17	1	0.17	
5814Z	Publishing of journals and periodicals	2,289	0.21	1	0.21	
5819Z	Other publishing activities	165	0.015	1	0.015	
5821Z	Publishing of computer games	393	0.036	1	0.036	
5829A	System and network software publishing	713	0.07	1	0.07	

Table 2.4.a. Composite or CI coefficients per branch – core CIs (continued)

5829B	Publishing of software, development tools and languages	207	0.02	1	0.02	
5829C	Publishing of application software	3,737	0.35	1	0.35	
59	**Motion picture, video and television programmer production activities; Sound recording and music publishing activities**	**6,451**				**0.91**
5911A	Production of motion pictures for television and television programmers	2,148	0.33	1	0.33	
5911B	Production of institutional and promotional motion pictures	536,0	0.08	1	0.08	
5911C	Production of motion pictures for cinema	1,379	0.21	1	0.21	
5912Z	Motion picture, video and television programmer post-production activities	1,000	0.15	1	0.15	
5913A	Motion pictures for cinema distribution	381	0.06	1	0.06	
5913B	Video publishing and distribution	132	0.02	1	0.02	
5920Z	Sound recording and music publishing activities	429	0.06	1	0.06	
60	**Programming and broadcasting activities**	**4,069**	**1**	**1**		**1**
6010Z	Radio broadcasting	697	0.17	1	0.17	
6020A	Broadcasting from general channels	3,140	0.77	1	0.77	
6020B	Publishing of specialized channels	231	0.06	1	0.06	
62	**Other information technology and computer service activities**	**24,431**				**0.76**
6201Z	Computer programming activities	4,119	0.16	0.8	0.128	
6202A	Hardware and software consultancy	14 537	0.6	0.8	0.48	
6203Z	Computer facilities management activities	4,056	0.15	1	0.15	
6209Z	Other information technology and computer service activities	151	0.006	1	0.006	
63	**Information service activities**	**3,423**				**0.15**
6391Z	News agency activities	524	0.15	1	0.15	
73	**Advertising and market research**	**8,848**				**0.85**
7311Z	Advertising agencies	4,733	0.53	1	0.53	
7312Z	Media representation	2,803	0.32	1	0.32	
74	**Other professional, scientific and technical activities**	**3,156**				**0.5**
7410Z	Specialized design activities	722	0.23	1	0.23	
7420Z	Photographic activities	502	0.16	1	0.16	
7430Z	Translation and interpretation activities	339	0.11	1	0.11	
90	**Creative, arts and entertainment activities**	**1,754**				**0.99**
9001Z	Performing arts	571	0.32	1	0.32	
9002Z	Support activities to performing arts	709	0.4	1	0.4	
9003	Artistic creation	291	0.17	1	0.17	
9004Z	Operation of arts facilities	183	0.1	1	0.1	

Source: Data from national accounts for 2011 plus calculations. To avoid overcrowding the table, decimals are omitted in column 3.

Thus, a coefficient for each branch has been calculated, which makes it possible to calculate the share of value added attributable to CIs for each branch. There are therefore as many coefficients as there are branches. This

table is similar to three other tables, since four CI sub-groups were created for three variables. The first of these tables is the one above (Table 2.4.a); the three others have been provided to the annex because of their length: Tables 2.4.b (interdependent), 2.4.c (partial) and 2.4.d (non-dedicated support). However, since the same operation must be conducted for employment and exports, given that the relative shares of CIs change and hence so do the transformation coefficients, there are eight other tables in the annex: Tables 2.4.e, f, g and h for employment; and Tables 2.4.i, k, l and m for external trade.

2.2 The economic contribution of CIs to development

The focus will be on 2012, definitive values for which were published in May 2014 (for exports, it is necessary to work with figures from 2011).

2.2.1 *The contribution of CIs to value added and GDP*

Since gross domestic product (GDP) is considered the main aggregate of a country's economic activity, it will be used to determine the economic contribution of CIs. If the aggregate copyright coefficients are applied to the value of the branches, their contribution to GDP in absolute and percentage terms can be obtained, with the same calculation being replicated successively for the four CI categories. To account for international comparisons and the difficulties inherent in the transition from value added to GDP, which can cause distortions depending on the country, the methodology recommended in the WIPO guide was followed (see paragraph 154, p. 38 of the guide). GDP is the sum of value added per branch, plus the amount after tax minus subsidies, which generally leads to a higher GDP level than the sum of value added, and therefore to general value added proportions that are higher than GDP proportions. It is worth noting that inter-industrial trade tables have not been used given their levels of disaggregation. For this reason, multipliers do not come into play.

Table 2.5.a shows the value for core industries, the sum of which is 67.9 billion euros, or 3.35 per cent of GDP (3.62 per cent of value added).

Table 2.5.a. Value added of core CIs in national accounts and percentage of GDP

		2012	Coefficient	2012
A88.18	Printing and reproduction of recorded media	4.0	0.14	0.6
A88.46	Wholesale, except automobiles and motorcycles	88.9	0.04	3.6
A88.47	Retail trade, except automobiles and motorcycles	81.7	0.03	2.5
A88.58	Publishing activities	12.5	0.88	11
A88.59	Motion picture, video and television programmer production, sound recording and music publishing activities; Sound recording and music publishing activities	7.2	0.8	5.8
A88.60	Programming and broadcasting activities	4.1	1	4.1
A88.62	Other information technology and computer service activities	38.9	0.7	27.2
A88.63	Information service activities	5.1	0.15	0.8
A88.74	Other professional, scientific and technical activities	4.3	0.5	2.2
A8873	Advertising and market research	9.2	0.6	5.5
A88.90	Creative, arts and entertainment activities	9.7	0.5	4.9
TOTAL	**Total value added of branches**			**67.9**
	Percentage of GDP aggregate (2012)			3.35%

The value added of interdependent CIs stands at 12.08 billion, that is, 0.60 per cent of GDP (0.64 per cent of total value added) (See Table 2.5.b).

Table 2.5.b. Value added of interdependent CIs in national accounts and percentage of value added

	Interdependent industries	2012	Coefficient	2012
A88.17	Manufacture of paper and paper products	4	0.14	0.54
A38.26	Manufacture of computer, electronic and optical products	10.4	0.41	4.26
A38.28	Manufacture of machinery and equipment n.e.c.	12.9	0.00	0.05
A88.32	Other manufacturing	4.3	0.02	0.09
A88.47	Retail trade, except automobiles and motorcycles	81.7	0.01	0.82
A88.77	Rental and leasing activities	29.7	0.2	5.95
A88.95	Repair of computers and personal and household goods	5.5	0.07	0.38
	Total interdependent CIs			**12.08**
	Percentage of GDP aggregate (2012)			0.60%

The value added of partial CIs stands at 38.1 billion euros, that is, 1.87 per cent of GDP (2.02 per cent of value added) (see Table 2.5.c).

Table 2.5.c. Value added of partial CIs in national accounts and percentage of GDP

	Partial CIs	2012	Coefficient	2012
A88.13	Manufacture of textiles	1.6	0.14	0.214
A88.14	Manufacture of wearing apparel	2	0.43	0.852
A88.15	Manufacture of leather and related products	1.6	0.87	1.366
A88.16	Woodworking and manufacture of wood and cork articles, apart from furniture; Manufacture of basketware and wickerwork	3.1	0.2	0.625
A88.17	Manufacture of paper and paper products	4	0.17	0.679
A88.18	Printing and reproduction of recorded media	4.1	0.03	0.103
A88.23	Manufacture of other non-metallic mineral products	7.5	0.08	0.604
A88.25	Manufacture of metal products apart from machinery and equipment	20.1	0.05	0.945
A88.31	Manufacture of furniture	2.3	0.5	1.650
A88.32	Other manufacturing	4.3	0.34	1.457
A88.46	Wholesale, except automobiles and motorcycles	88.9	0.02	1.867
A88.47	Retail trade, except automobiles and motorcycles	81.7	0.09	7.351
A88.71	Architectural and engineering activities; Technical testing and analysis	25.9	0.69	17.871
A88.91	Libraries, archives, museums and other cultural activities	3.3	0.80	2.604
	Total partial CIs			**38.1**
	Percentage of GDP aggregate (2012)			1.87%

The value added of non-dedicated support CIs stands at 24.3 billion euros, that is, 1.20 per cent of GDP (1.29 per cent of total value added) (Table 2.5.d).

Table 2.5.d. Value added of non-dedicated support CIs in national accounts and percentage of GDP

		1999	2012	Coefficient	2012
A88.46	Wholesale, except automobiles and motorcycles	65.2	88.9	0.03	2.67
A88.47	Retail trade, except automobiles and motorcycles	56.3	81.7	0.15	12.25
A88.49	Land transport and transport via pipelines	25.8	36.9	0.04	1.48
A88.51	Air transport	4.0	7.6	0.10	0.76
A88.52	Warehousing and support activities for transportation	19.3	31.2	0.11	3.44
A88.53	Postal and courier activities	8.3	8.5	0.01	0.09
A38.61	Telecommunications	21.8	25.2	0.07	1.76
A88.63	Information service activities	3.6	5.1	0.06	0.31
A88.79	Travel agency, tour operator and other reservation service and related activities	1.8	2.3	0.65	1.52
	Total non-dedicated support CIs				**24.3**
TOTAL	**Percentage of GDP aggregate (2012)**				**1.2%**

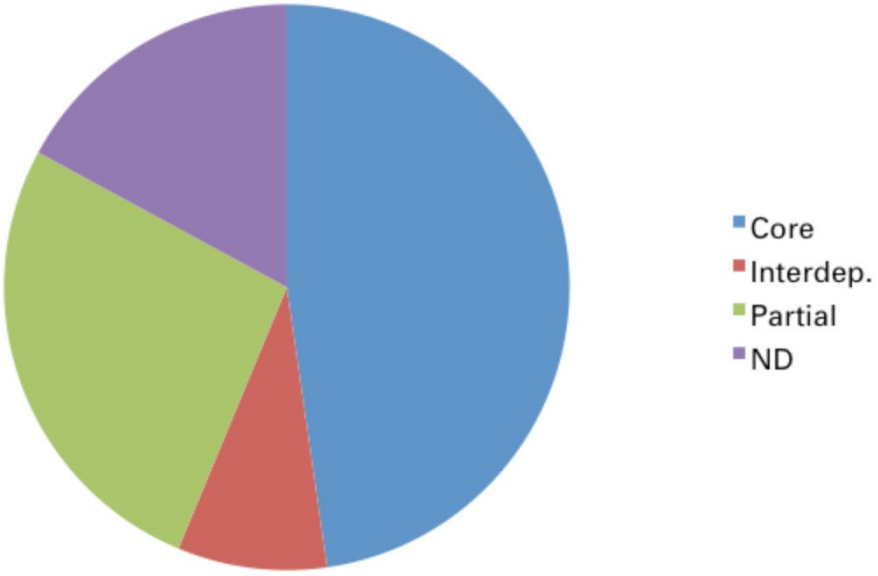
All CIs therefore account for **7.02 per cent of GDP** (7.57 per cent of total value added). This proportion is high but it also shows that, relatively speaking, the probable potential of the core CIs does not contribute as much as the rest of the value chain, given that almost 50 per cent of this value chain falls under the most traditional activities in this sector (Table 2.5.e). If the value added of CIs were linked to general value added and not to GDP, the proportion would be significantly higher, at about 7.57 per cent. This, as stated before, is owing to the difference between GDP and the sum of value added. GDP adjusts the total value added by taking account of the net tax minus subsidies. This tax rate is high in France compared to other countries and therefore it might be considered that the 7.02 per cent figure, which is the only one that can be used in an international comparison, does in fact reduces the actual contribution of CIs in France, compared to what obtains in a good number of other countries.

The same calculations yield 7.01 per cent in 2008, 6.93 per cent in 2010 and 6.86 per cent in 2012. One problem is that the GDP values are currently being reviewed and this can last for as long as three years after the reference year. This means that, four years after the beginning of the crisis, CIs have risen back to their initial level of contribution, despite a significant drop in 2010 and 2011. If considered in terms of indices (2008 = 100), it will be noted that the index of core CIs rose to 106 in 2012; the index for interdependent CIs, which is fairly low compared to the others, rose to 120; the index for partial CIs rose to 97 after dipping to 96 in 2010; and the index for non-dedicated support CIs rose to 102 after also falling below 100. This therefore means that CIs are sensitive to economic fluctuations, but this sensitivity is mainly due to partial CIs, whereas core CIs seem less sensitive. This is logical.

Table 2.5.e. Summary of contribution of CIs to GDP, expressed as a percentage

Core	3.35
Interdependent	0.60
Partial	1.87
Non-dedicated support	1.20

Chart 2.1.



2.2.2 *The contribution of CIs to employment*

A distinction is made between full-time equivalent (FTE) employment and the number of persons employed during the year. This distinction is important in that it helps to show the difference between the respective modes of managing employment. The industries that show a similarity in these indicators offer highly stable and secure employment and the reverse is true when the difference between these indicators increases.

FTE employment

Core CIs support 906,700 FTE jobs, **3.56 per cent** of the 25,495,000 FTE jobs in France in 2012.

Table 2.6.a. FTE employment of core CIs in national accounts and percentage of total FTE employment

(in thousands of jobs)

		2012	Coefficient	2012
A88.18	Printing and reproduction of recorded media	74.8	0.420	31.4
A88.46	Wholesale, except automobiles and motorcycles	1,064.8	0.043	45.8
A88.47	Retail trade, except automobiles and motorcycles	1,862.8	0.020	37.3
A38.58	Publishing activities	114.1	0.990	113.0
A88.59	Motion picture, video and television programmer production, sound recording and music publishing activities; Sound recording and music publishing activities	50.2	0.930	46.7
A88.60	Programming and broadcasting activities	33.0	1.000	33.0
A88.62	Other information technology and computer service activities	376.4	0.670	252.2
A88.63	Information service activities	65.7	0.080	5.3
A88.73	Advertising and market research	151.7	0.840	127.4
A88.74	Other professional, scientific and technical activities	62.0	0.500	31.0
A88.90	Creative, arts and entertainment activities	185.5	0.990	183.7
				906.7
TOTAL	**Total for branches**	**25,495.1**		**25,495.1**
				3.56%

Interdependent CIs support 77,300 FTE jobs, **0.3 per cent** of the 25,495,000 FTE jobs.

Table 2.6.b. FTE employment of interdependent CIs in national accounts and percentage of total FTE employment

(in thousands of jobs)

		2012	Coefficient	2012
A88.17	Manufacture of paper and paper products	60.4	0.1	7.5
A38.CI	Manufacture of computer, electronic and optical products	83.5	0.5	41.8
A38.CK	Manufacture of machinery and equipment n.e.c.	158.4	0.0	0.3
A88.32	Other manufacturing	71.6	0.0	1.4
A88.47	Retail trade, except automobiles and motorcycles	1,862.8	0.0	18.6
A88.77	Rental and leasing activities	128.9	0.0	2.6
A88.95	Repair of computers and personal and household goods	71.6	0.1	5.0
				77.3
TOTAL	**Total for branches**	**25,495.1**		**25,495.1**
				0.30%

Partial CIs support 462,100 FTE jobs, **1.81 per cent** of the 25,495,000 FTE jobs.

Table 2.6.c. FTE employment of partial CIs in national accounts and percentage of total FTE employment

(in thousands of jobs)

		2012	Coefficient	2012
A88.13	Manufacture of textiles	42.3	0.145	6.1
A88.14	Manufacture of wearing apparel	42.3	0.540	22.8
A88.15	Manufacture of leather and related products	22.4	0.770	17.2
A88.16	Woodworking and manufacture of wood and cork articles, apart from furniture; Manufacture of basketware and wickerwork	65.0	0.210	13.7
A88.17	Manufacture of paper and paper products	60.4	0.110	6.6
A88.18	Printing and reproduction of recorded media	74.8	0.130	9.7
A88.23	Manufacture of other non-metallic mineral products	101.2	0.093	9.4
A88.25	Manufacture of metal products apart from machinery and equipment	306.1	0.035	10.7
A88.31	Manufacture of furniture	58.000	0.50	29
A88.32	Other manufacturing	71.6	0.014	1.0
A88.46	Wholesale, except automobiles and motorcycles	1,064.8	0.023	24.5
A88.47	Retail trade, except automobiles and motorcycles	1,862.8	0.028	52.2
A88.71	Architectural and engineering activities; Technical testing and analysis	351.6	0.620	218.0
A88.91	Libraries, archives, museums and other cultural activities	51.3	0.800	41.1
				462.1
	Thousands of people in “full-time equivalent” employment			25,495.1
				1.81%

Non-dedicated support CIs support 413,500 jobs, **1.62 per cent** of the 25,495,000 FTE jobs.

Table 2.6.d. TE employment of non-dedicated support CIs in national accounts and percentage of total FTE employment

(in thousands of jobs)

		2012	Coefficient	2012
A88.46	Wholesale, except automobiles and motorcycles	1,064.8	0.03	31.9
A88.47	Retail trade, except automobiles and motorcycles	1,862.8	0.15	279.4
A88.49	Land transport and transport via pipelines	767.0	0.03	23.0
A88.51	Air transport	63.7	0.08	5.1
A88.52	Warehousing and support activities for transportation	247.0	0.11	27.2
A88.53	Postal and courier activities	224.6	0.01	2.2
A38.61	Telecommunications	127.5	0.07	8.9
A88.63	Information service activities	65.7	0.06	3.9
A88.79	Travel agency, tour operator and other reservation service and related activities	48.9	0.65	31.8
				413.5
TOTAL	**Total for branches**	**25,495.1**		**25,495,1**
				1.62%

In terms of FTE jobs, CIs therefore account for **7.29 per cent** of total FTE employment.

Number of persons employed

Core CIs support 981,000 jobs, **3.73 per cent** of the 27,090,500 persons employed.

Table 2.7.a. Number of persons employed by core CIs and percentage of total employment

(in thousands of jobs)

		2012	Coefficient	2012
A88.18	Printing and reproduction of recorded media	78.1	0.42	32.8
A88.46	Wholesale, except automobiles and motorcycles	1,064.8	0.04	45.8
A88.47	Retail trade, except automobiles and motorcycles	1,862.8	0.02	37.3
A38.JA	Publishing, audiovisual and broadcasting activities	124.7	0.99	123.5
A88.59	Motion picture, video and television programmer production, sound recording and music publishing activities; Sound recording and music publishing activities	54.2	0.93	50.4
A88.60	Programming and broadcasting activities	34.8	1.00	34.8
A88.62	Other information technology and computer service activities	385.6	0.67	258.3
A88.63	Information service activities	69.1	0.08	5.5
A88.73	Advertising and market research	171.9	0.84	144.4
A88.74	Other professional, scientific and technical activities	66.0	0.50	33.0
A88.90	Creative, arts and entertainment activities	217.8	0.99	215.6
				981.4
TOTAL	**Total for branches**	**27,090.5**		**27,090.5**
				3.62%

Interdependent CIs support 84,500 jobs, **0.31 per cent** of the 27,090,500 people employed.

Table 2.7.b. Number of persons employed by interdependent CIs and percentage of total FTE employment

(in thousands of jobs)

		2012	Coefficient	2012
A88.18	Printing and reproduction of recorded media	78.1	0.13	9.8
A38.CI	Manufacture of computer, electronic and optical products	87.1	0.50	43.6
A38.CK	Manufacture of machinery and equipment n.e.c.	164.1	0.00	0.3
A88.32	Other manufacturing	74.7	0.02	1.5
A88.47	Retail trade, except automobiles and motorcycles	2,116.5	0.01	21.2
A88.77	Rental and leasing activities	134.5	0.02	2.7
A88.95	Repair of computers and personal and household goods	77.8	0.07	5.4
				84.5
	Total for branches	**27,090.5**		**27,090.5**
TOTAL				**0.31%**

Partial CIs support 485,600 jobs, **1.79 per cent** of the 27,090,500 persons employed.

Table 2.7.c. Number of persons employed by partial CIs and percentage of total FTE employment

(in thousands of jobs)

		2012	Coefficient	2012
A88.13	Manufacture of textiles	44.1	0.145	6.4
A88.14	Manufacture of wearing apparel	43.7	0.540	23.6
A88.15	Manufacture of leather and related products	23.2	0.770	17.9
A88.16	Woodworking and manufacture of wood and cork articles, apart from furniture; Manufacture of basketware and wickerwork	67.9	0.210	14.3
A88.17	Manufacture of paper and paper products	62.6	0.110	6.9
A88.18	Printing and reproduction of recorded media	78.1	0.030	2.3
A88.23	Manufacture of other non-metallic mineral products	105.4	0.093	9.8
A88.25	Manufacture of metal products apart from machinery and equipment	317.9	0.035	11.1
A88.31	Manufacture of furniture	58,300	0.50	29,150
A88.32	Other manufacturing	74.7	0.014	1.0
A88.46	Wholesale, except automobiles and motorcycles	1,121.7	0.023	25.8
A88.47	Retail trade, except automobiles and motorcycles	2,116.5	0.028	59.3
A88.71	Architectural and engineering activities; Technical testing and analysis	375.1	0.620	232.5
A88.91	Libraries, archives, museums and other cultural activities	56.8	0.800	45.4
				485.6
TOTAL	**Total for branches**	**27,090.5**		**27,090.5**
				1.79%

Non-dedicated support CIs support 175,950 jobs, **0.65 per cent** of the 27,090,500 persons employed.

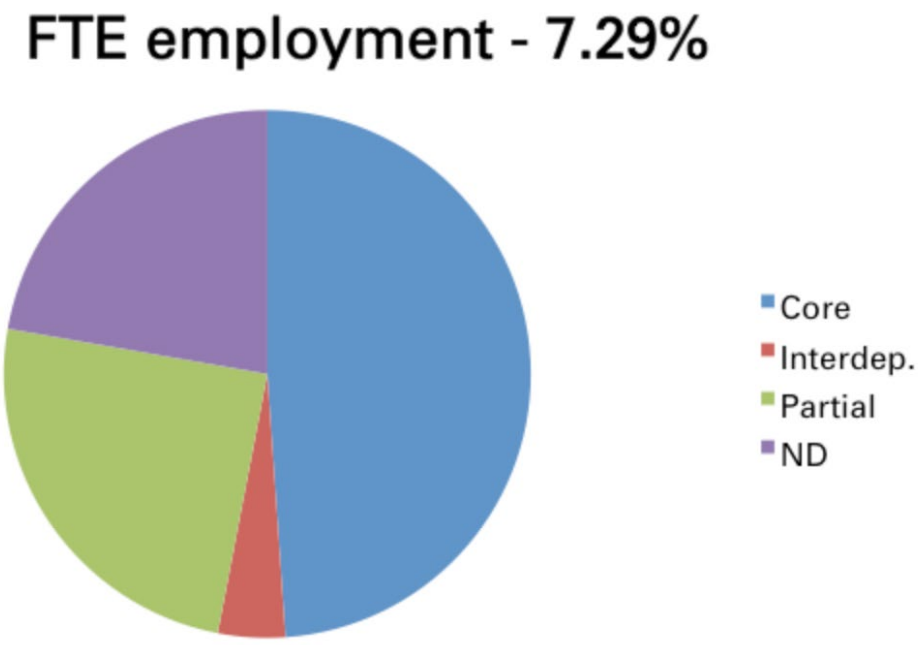
Table 2.7.d. Number of persons employment by non-dedicated support CIs and percentage of total FTE employment

(in thousands of jobs)

		2012	Coefficient	2012
A88.46	Wholesale, except automobiles and motorcycles	1,121.7	0.03	33.65
A88.47	Retail trade, except automobiles and motorcycles	2,116.5	0.02	31.75
A88.49	Land transport and transport via pipelines	805.5	0.03	24.17
A88.51	Air transport	70.7	0.08	5.66
A88.52	Warehousing and support activities for transportation	258.9	0.11	28.48
A88.53	Postal and courier activities	241.7	0.01	2.42
A38.JB	Telecommunications	136.0	0.07	9.52
A88.63	Information service activities	69.1	0.06	4.15
A88.79	Travel agency, tour operator and other reservation service and related activities	54.1	0.65	35.16
				174.95
TOTAL	**Total for branches**	**27,090.5**		**27,090.5**
				0.65%

Hence, when the figures are consolidated, CIs account for 6.37 per cent of employment. It emerges from the comparison of the two percentages (7.29 per cent of FTE employment, but 6.37 per cent of the number of people employed) that the structure of employment is possibly more stable in CIs than in other sectors of the economy. However, it should also be noted that the core CIs, probably because of the high number of artistic jobs involved, mainly generate this difference.

Chart 2.2. Summary of contribution of CIs to employment



2.2.3 *The contribution of CIs to external trade*

Exports

The contribution of CIs to exports raises a particular problem in that INSEE makes significant territorial corrections to export statistics to compensate for tourist purchases in France, which can therefore be considered as exports. However, this raises a difficulty: these purchases could be services that fall under activities not initially considered to be CIs, but there is no flexibility to take this factor into account. For this reason, a prudential rule is adopted: only a fifth of the correction is taken into account and added to the sum of the four CIs in exports, yielding 8.34 billion euros (= 41.7 billion/5) for 2012. This corrective coefficient therefore means that one fifth of CI activities are consumed within the country by non-residents. The question the arises as to why this coefficient should be used instead of the one resulting, for example, from the percentage of CIs in GDP (7.02 per cent). The answer is that among those cultural products that play a key role in CIs, foreign tourists consume a significant part: in 2012, France ranked second in countries with the highest earnings from tourism, even though it is the leading tourist destination.

For each category of CIs, therefore, the copyright coefficient is applied to the relevant branches: these coefficients are different from the preceding ones because they rely on the relative position of CIs in each branch (see Table 2.4 in the annex).

Exports of core CIs stand at 11.19 billion euros, minus territorial correction.

Table 2.8.a. CI exports (less territorial correction)

(in billion euros)

		2012	Coefficient	2012
A88.18	Printing and reproduction of recorded media	0.1	0.09	0.01
A88.46	Wholesale, except automobiles and motorcycles	9.1	0.10	0.91
A88.47	Retail trade, except automobiles and motorcycles	0.1	0.03	0.03
A88.58	Publishing activities	1.9	1.00	1.90
A88.59	Motion picture, video and television programmer production, sound recording and music publishing activities; Sound recording and music publishing activities	1.6	1.00	1.60
A88 60	Programming and broadcasting activities	0.0	0.97	0.01
A38 62	Other information technology and computer service activities	4.1	0.75	3.08
A88.63	Information service activities	0.1	0.3	0.03
A88.73	Advertising and market research	3.4	0.71	2.41
A88.74	Other professional, scientific and technical activities	0.0	0.55	0.01
A88.90	Creative, arts and entertainment activities	1.2	1.00	1.20
				11.19

Exports of interdependent CIs stand at 17.38 billion euros, minus territorial correction.

Table 2.8.b. Export of interdependent CIs (less territorial correction)

(in billion euros)

		2012	Coefficient	2012
17	Manufacture of paper and paper products	6.4	0.33	2.11
26	Manufacture of computer, electronic and optical products	28.6	0.42	12.01
28	Manufacture of machinery and equipment n.e.c.	36.0	0.07	2.52
32	Other manufacturing	11.5	0.026	0.30
47	Retail trade, except of motor vehicles and motorcycles	0.1	0.001	0.0001
77	Rental and leasing activities	10.3	0.034	0.35
95	Repair of computers and personal and household goods	1.0	0.09	0.09
				17.38

Exports of partial CIs stand at 18.05 billion euros, minus territorial correction.

Table 2.8.c. Export of partial CIs (less territorial correction)

(in billion euros)

		2012	Coefficient	2012
A88.13	Manufacture of textiles	3.6	0.06	0.2
A88.14	Manufacture of wearing apparel	8.0	0.67	2.7
A88.15	Manufacture of leather and related products	7.1	0.74	3.0
A88.16	Woodworking and manufacture of wood and cork articles, apart from furniture; Manufacture of basketware and wickerwork	1.9	0.24	1.0
A88.17	Manufacture of paper and paper products	6.4	0.11	0.4
A88.18	Printing and reproduction of recorded media	0.1	0.26	1.0
A88.23	Manufacture of other non-metallic mineral products	5.0	0.05	0.2
A88.31	Manufacture of furniture	1.7	0.5	0.85
A88.25	Manufacture of metal products apart from machinery and equipment	10.5	0.06	0.2
A88.32	Other manufacturing	11.5	0.14	0.6
A88.46	Wholesale, except automobiles and motorcycles	3.5	0.03	0.1
A88.47	Retail trade, except automobiles and motorcycles	0.1	0.28	0.8
A88.71	Architectural and engineering activities; Technical testing and analysis	5.9	0.94	3.8
A88.91	Libraries, archives, museums and other cultural activities	0.3	0.80	3.2
				18.05

Non-dedicated support CI exports stand at 1.7 billion euros, minus territorial adjustment.

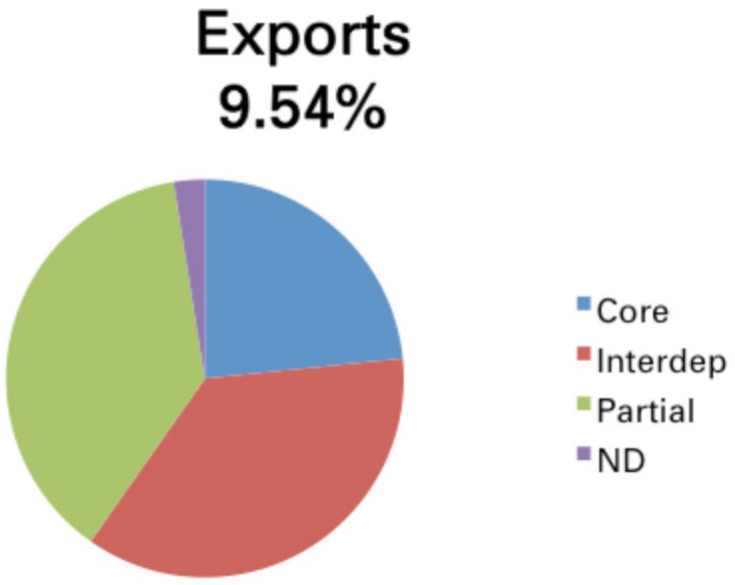
Table 2.8.d. **Export of non-dedicated support CIs (less territorial correction)**

(in billion euros)

		Activity	2012	Branch coefficient	2012
a88	46	Wholesale trade, except of motor vehicles and motorcycles	3.5	0.2	0.7
a88	47	Retail trade, except of motor vehicles and motorcycles	0.1	0.027	0.0027
a88	49	Land transport and transport via pipelines	4.6	0.081	0.3726
a88	51	Air transport	9.6	0.01	0.096
a88	52	Warehousing and support activities for transportation	3.3	0.025	0.0825
a88	53	Postal and courier activities	0.9	0.009	0.0081
a88	61	Telecommunications	3.8	0.093	0.3534
a88	63	Information service activities	0.1	0.052	0.0052
a88	79	Travel agency, tour operator and other reservation service and related activities	0.1	0.91	0.091
					1.7115

The contribution of CIs to exports, adjusting for territorial correction, therefore stands at 56.66 billion euros, **9.54 per cent** of the total amount of exports in 2012. There is a notable difference in the distribution at this point: core CIs account for barely one quarter of these exports, whereas partial and mostly non-dedicated industries each account for over 37 per cent. For interdependent CIs, this can largely be explained by the export of optical and information technology products. It should be noted that corrections to the 2012 figures, which were made in 2014, led to a sharp reduction in these exports as a result of a different calculation of retail trade, automatically entailing a two-point drop, the calculated coefficient for 2012 being above 11 per cent.

Chart 2.3. **Contribution of CIs to exports**



Imports

The amount of core CI imports stands at 8.62 billion euros.

Table 2.9.a. Imports of core CIs

(in billion euros)

		2012	Coefficient	2012
A88.18	Printing and reproduction of recorded media	0.001	0.09	0.00
A88.46	Wholesale, except automobiles and motorcycles	5.1	0.1	0.51
A88.47	Retail trade, except automobiles and motorcycles	0.01	0.03	0.00
A88.58	Publishing activities	2.6	1	2.60
A88.59	Motion picture, video and television program production, sound recording and music publishing activities; Sound recording and music publishing activities	2.3	1	2.30
A88 60	Programming and broadcasting activities	0	0.97	0.00
A38 62	Other information technology and computer service activities	0.3	0.75	0.23
A88.63	Information service activities	0.1	0.3	0.03
A88.73	Advertising and market research	3.6	0.71	2.56
A88.74	Other professional, scientific and technical activities	0	0.55	0.00
A88.90	Creative, arts and entertainment activities	0.4	1	0.40
				8.62

The amount of interdependent CIs stands at 24.31 billion euros.

Table 2.9.b. Imports of interdependent CIs

(in billion euros)

		2012	Coefficient	2012
17	Manufacture of paper and paper products	9.0	0.33	2.97
26	Manufacture of computer, electronic and optical products	42.8	0.42	17.98
28	Manufacture of machinery and equipment n.e.c.	38.1	0.07	2.67
32	Other manufacturing	15.1	0.026	0.39
47	Retail trade, except of motor vehicles and motorcycles	0.0	0.001	0.00
77	Rental and leasing activities	9.0	0.034	0.31
95	Repair of computers and personal and household goods	0.0	0.09	0.00
				24.31

The amount of partial CIs stands at 36.8 billion euros.

Table 2.9.c. Imports of partial CIs

(in billion euros)

		2012	Coefficient	2012
A88.13	Manufacture of textiles	5.3	0.06	0.3
A88.14	Manufacture of wearing apparel	16.8	0.67	11.3
A88.15	Manufacture of leather and related products	12.7	0.74	9.4
A88.16	Woodworking and manufacture of wood and cork articles, apart from furniture; Manufacture of basketware and wickerwork	3.7	0.24	0.9
A88.17	Manufacture of paper and paper products	9.0	0.11	1.0
A88.18	Printing and reproduction of recorded media	0.1	0.26	0.0
A88.23	Manufacture of other non-metallic mineral products	6.8	0.05	0.3
A88.31	Manufacture of furniture	6.0	0.50	3.0
A88.25	Manufacture of metal products apart from machinery and equipment	13.6	0.06	0.8
A88.32	Other manufacturing	15.1	0.14	2.1
A88.46	Wholesale, except automobiles and motorcycles	5.1	0.03	0.1
A88.47	Retail trade, except automobiles and motorcycles	0.1	0.28	0.0
A88.71	Architectural and engineering activities; Technical testing and analysis	7.8	0.94	7.3
A88.91	Libraries, archives, museums and other cultural activities	0.2	0.80	0.2
				36.8

The amount of non-dedicated support CI imports stands at 10.18 billion euros.

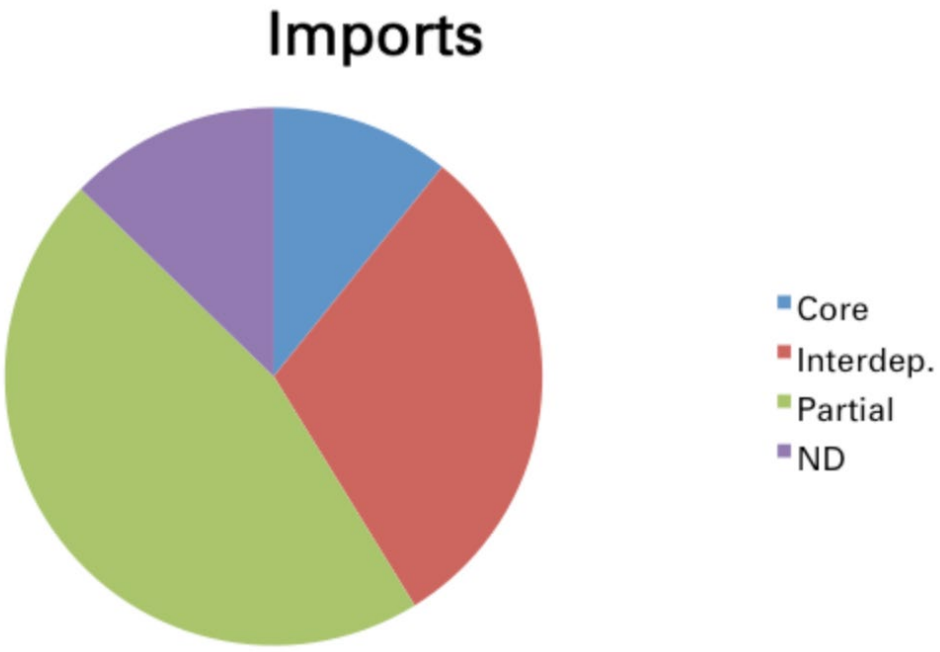
Table 2.9.d. Imports of non-dedicated support CIs

(in billion euros)

LEVEL	Sector	2012	Coefficient	2012
a88	46	5.1	0.2	1.02
a88	47	0.1	0.027	0.00
a88	49	14.7	0.081	1.19
a88	51	7.5	1	7.50
a88	52	7.2	0.025	0.18
a88	53	0.9	0.009	0.01
a88	61	2.8	0.093	0.26
a88	63	0.1	0.052	0.01
a88	79	0.0	0.91	0.01
				10,18

All imports therefore yield 79.81 billion euros, 11.46 per cent of total imports.

Chart 2.4. Contribution of CIs to imports



The external balance for CIs thus shows a distinct deficit, owing mainly to industries other than those constituting the core CIs. Nonetheless it is also worth noting that the total external trade balance also showed a deficit. The result per item shows that the partial CIs (18.3) are the main source of the deficit, followed by the non-dedicated support CIs (8.48) and the interdependent CIs (7.01), whereas the core CIs show a net gain (+2.57). This situation therefore owes more to the general state of the French economy than to the very principle of CIs, since the activities that are furthest removed from creation are those which affect the external trade balance (Table 2.10).

Table 2.10. Performance of CIs in external trade

Type of CIs	Exports	Imports	Balance
Core	11.19	8.62	+2.57
Interdependent	17.3	24.31	7.01
Partial	18.5	36.80	18.30
Non-dedicated support	1.7	10.18	8.48

2.2.4 *Summary of results on the contribution of CIs to economic activity*

There are four major lessons from the preceding analysis.

- The contribution of CIs to GDP (7.02 per cent) is significant and taken as a whole, CIs are a major component of economic development from the perspective of production, employment and external trade.
- The contribution to GDP is less than the contribution to employment (7.29 per cent), which suggests lower than average productivity, but, as will be seen in the following chapter, different CIs contribute to this result in specific ways.
- The contribution to exports is higher than the contribution to production and employment, but the average export rate of French industries is also appreciably higher, standing at about 17 per cent.

- Conversely, the external trade balance for CIs is in the negative, more as a result of the poor performance of partial industries than of the core industries. This holds true for the French economy overall in the last few years: there has been a loss of competitiveness of its industries in the global market.

Finally, 2012 was also a relatively bad year for French industry, since it suffered the adverse effects of the 2007/2008 crisis and there was no viable prospect of recovery at the time.

2.2.5 *Analysis according to thematic groups*

Apart from the methodology followed so far, it is also possible to group items differently, given that the activities described can fall under a variety of categories. An example is press activities, which can be classified under core or partial industries. Moreover, for a number of these CIs, there is a rather traditional sequence from production to distribution to exploitation; these sequential stages can fall under different CIs, but they are also a salient reality in terms of explaining their own growth and their contribution to economic development.

The statistics for branches are too aggregated to allow asimilar analysis and the available statistics for sectors often undervalue the role of certain bodies, such as non-profit associations, which play a significant role in the area of core CIs.

Accordingly, cgreat care has gone into producing the table below. An example of this difficulty is the number of stage actors who can fall under several sectors and branches. When calculated based on the intermittency system or their own social security system, there were over 120,000 stage actors in 2012, but the available national accounts data give much lower figures.

Finally, it is worth noting that the groupings recommended by the methodological guide do not correspond to the normal distribution of cultural activities in France: for example, literature has no direct link with the press and is subject to separate labor and social security regulations, even if there are some overlaps.

2.2.5.1 *Core CIs*

It is not always easy to match Tables 2.11 and Charts 5 and 6, which are based on the French study, with the WIPO data. There are two reasons for this difficulty. Firstly, is difficult to determine the contribution of collective copyright management societies. A highly reliable imaginary value has therefore been assigned to these societies to enable comparison, but this does not change the significance of comparisons among core CIs. Secondly, it is not always possible to use the data on trade to fine-tune the sub-categories according to the type of cultural product, as would be desirable. Two observations therefore come to mind:

- in terms of contribution to GDP, software is notably significant, accounting for nearly half of the core CIs, followed by cinema and advertising; and
- in terms of FTE, hierarchies are partly flattened and even reversed in some cases: software continues to dominate, but its significance is considerably diminished, and cinema and advertising see a marked increase.

Table 2.11.a. Analysis of core CIs (value added and FTE employment)

Activity	Sub-sector	Value added	% of GDP	FTE	Total FTE %
Press and literature	1319, 1813, 2229, 4761, 5813, 7430, 6391, 91	15,208	0.7	143,835	0.5
Music and dramatic arts	3222, 9001, 9002, 9003 B 9004	1,741	0.08	22,808	0.09
Graphic arts	7410, 7490	2,629	0.13	9,962	0.03
Cinema and video	22 (33%), 59	9,731	0.48	84,751	0.34
Radio and Internet	22(33%), 60,631	4,801	0.24	30,812	0.12
Photos	742	495	0.02	5 366	0.021
Advertising	7430	7,815	0.3	94 819	0.379
Software	26, 4651, 627,233	57,610	2.88	268,659	1.07

Chart 2.5. **Distribution of main activities (value added)**

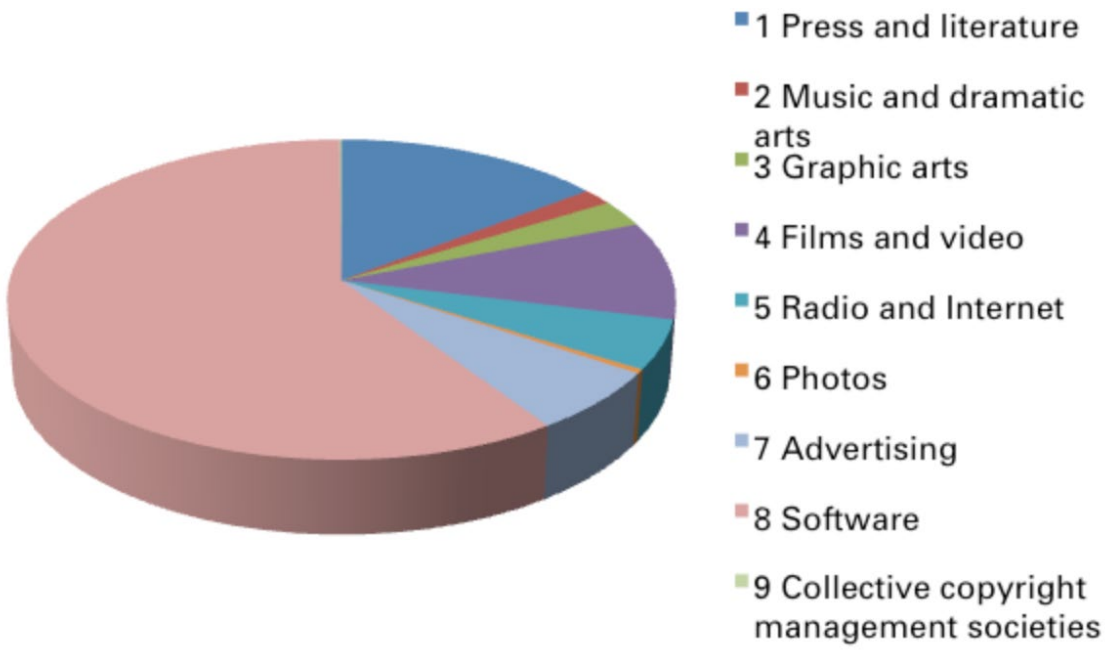
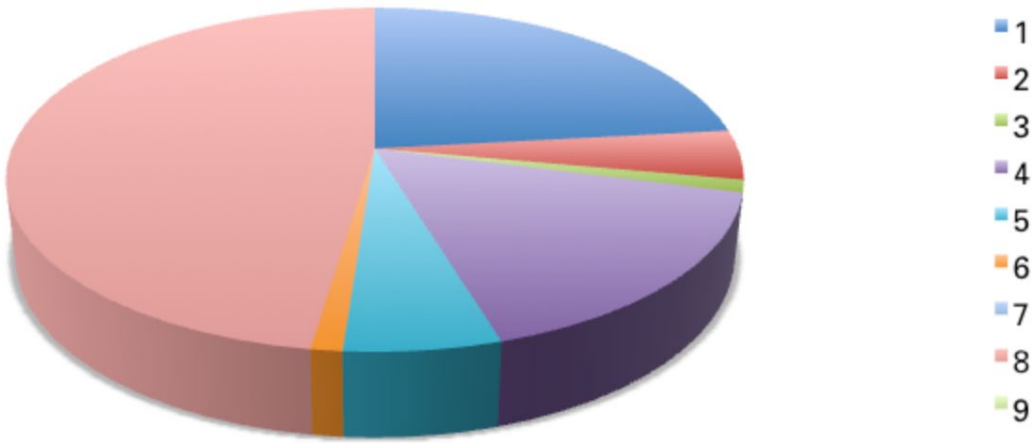


Table 2.11.b. **Analysis of core CIs (value added and FTE employment)**

1.	Press and literature	**14.46%**
2.	Music and dramatic arts	**1.65%**
3.	Graphic arts	**2.68%**
4.	Films and video	**9.83%**
5.	Radio and Internet	**4.95%**
6.	Photos	**0.4%**
7.	Advertising	**6.2%**
8.	Software	**58.8%**
9.	Collective copyright management societies	**0.1%**

Chart 2.6. **Distribution of core CIs in FTE jobs**



2.2.5.2 *Analysis according to thematic groups: Interdependent CIs*

The identification of thematic groups of interdependent CIs is a very delicate task because digitization leads to versatility of the instruments of production, media and communication networks. The main characteristic of the "digital culture" today is the interchangeability of functions, and the specific levels of flexibility of national accounts only amplify a fundamental problem. Today, it is difficult to separate a telephone from a computer, a television set, a radio set, etc. It must be admitted that these distinctions are increasingly irrelevant.

Hence, the grouping proposed is entirely relative and, at best, can only provide relative positions. Moreover, some figures had to be retrieved from INSEE's ESANE database because national accounts did not allow for their calculation, thereby creating a certain discrepancy with figures already provided.

Two points stand out in Tables 2.12.a and b:

- "Computers" stand out, but mainly owing to marketing rather than production. This is equally true for the TV and related equipment group, but to a lesser extent.
- There is a certain readjustment of percentages when moving from value added to employment for paper, musical instruments and photography instruments.

Table 2.12.a. Relative share of value added of the two main groups of interdependent CIs

Group	Value	Percentage
1. Paper	540	9.7
2. TV and related equipment	2,043	37
3. Computers	2,700	48.8
4. Musical instruments	109	1.97
5. Photography instruments	140	2.53

Chart 2.7. Relative share of value added of the two main groups of interdependent CIs

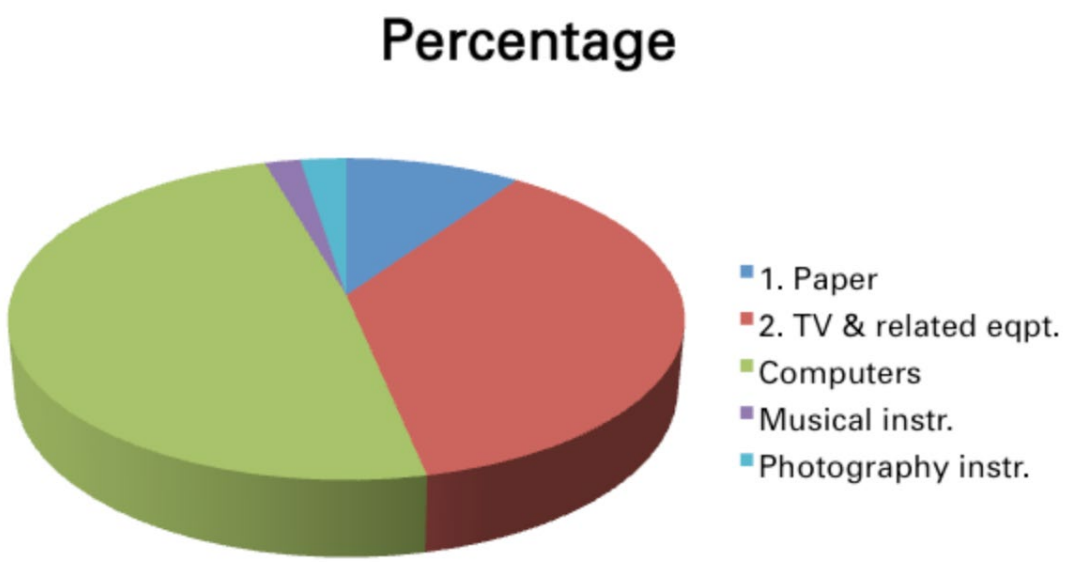
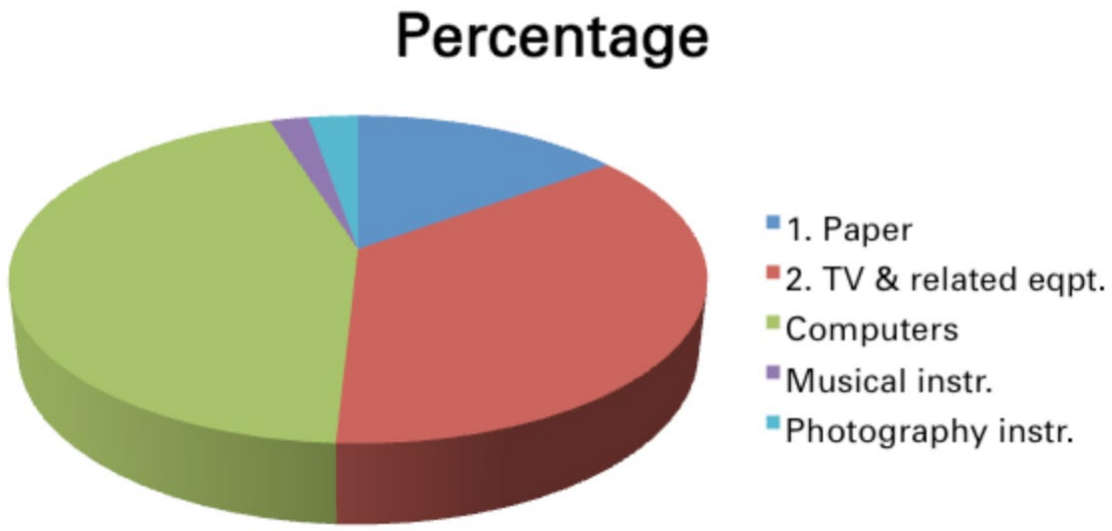


Table 2.12.b. Relative share of value added of the two main groups of interdependent CIs

Group	Value	Percentage
1. Paper	9,800	14.96
2. TV and related equipment	23,500	35.88
3. Computers	29,000	44.28
4. Musical instruments	1,379	2.12
5. Photography instruments	1,809	2.76

Chart 2.8. Relative share of value added of the two main groups of interdependent CIs



2.2.5.3 *Analysis according to thematic groups: Partial CIs*

While it is easier to distinguish partial industries than interdependent industries, particularly based on how they evolve, partial industries raise serious problems in terms of statistical classification. In order to identify the main activity groups, it was necessary to distribute data for various sectors shown in national accounts (particularly the ESANE data for 2012) rather than classifying them under branches. Hence, the results are significant in terms of the relative rather than absolute size of groups, as previously mentioned. To dispel any confusion, the relative weights of the various sectors were used; it is worth noting that they are weighted according to copyright coefficients.

Several lessons can be drawn from Tables 2.13.a and b:

- The weight of architecture is significant, especially in terms of value added but also in terms of employment. On its own, architecture limits the scope of comparisons; it should in fact be noted that in France, architecture is increasingly considered a core rather than a partial copyright activity, given that it is very much a cultural industry.
- The significant share of leather and furniture, but more in terms of value added than of FTE employment.
- Textiles and apparel may be classified under the handicrafts industry, distancing them from CIs, although the copyright coefficient has already diminished this prospect. A detailed review of the data does show that most of the activity is generated by wholesale and retail.
- The very small share held by toys, most of which are imported, as compared to jewelry, which is much more significant.

Table 2.13.a. Relative share of value added of the main groups of partial CIs

Textiles/apparel	8%
Leather	38%
Furniture	17%
Glass	2%
Wallpaper	3%
Jewelry	10%
Toys	1%
Architecture	68%
Museums	7%

Chart 2.9. Relative share of value added of the main groups of partial CIs

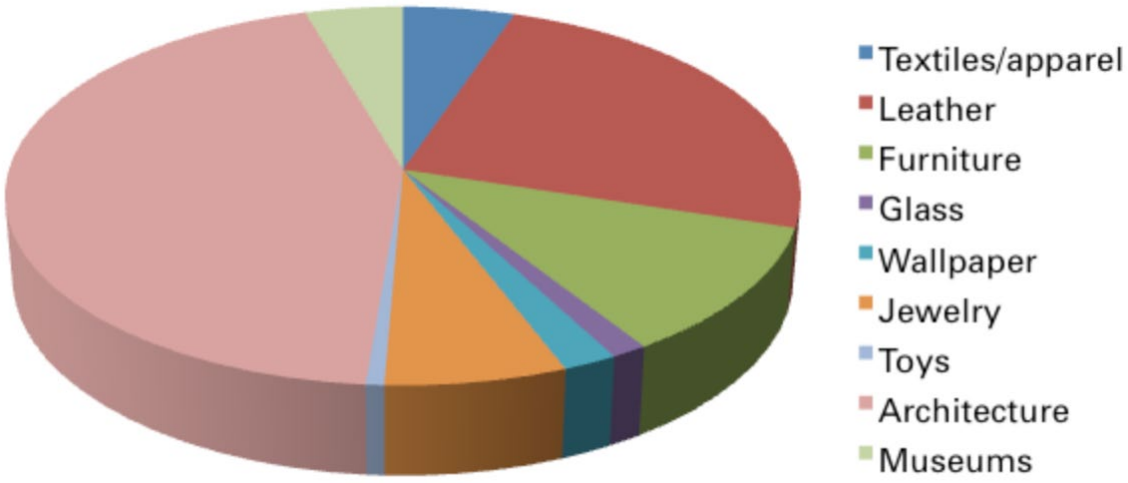
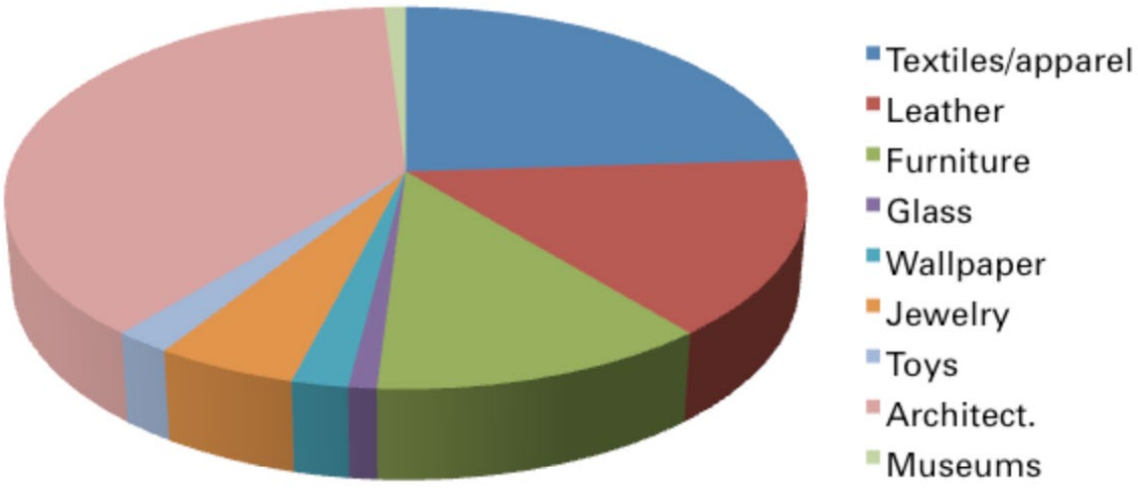


Table 2.13.b. Relative share of employment of the main groups of partial CIs

Textiles/apparel	24%
Leather	15%
Furniture	12%
Glass	1%
Wallpaper	2%
Jewelry	5%
Toys	2%
Architect.	38%
Museums	1%

Chart 2.10. Relative share of employment of the main groups of partial CIs



2.2.5.4 *Analysis according to thematic groups: Non-dedicated support CIs*

There are three sub-groups in non-dedicated support CIs: commerce, transport and telecommunications (broadly construed). Commerce of course has the largest share in light of the economic activity it generates (see Tables 2.14.a and b).

An important distinction should be noted in the weight of the sub-groups, depending on whether value added or FTE employment is used:

– in terms of value added, the largest sector is commerce, far ahead of transport and telecommunications; and

– in terms of FTE employment, there is a reversal of the two largest items, with telecommunications lagging behind, regardless of the indicator used.

Table 2.14.a. Relative share of value added of non-dedicated support CIs

Commerce	14.92	61.5
Transport	7.2	29.6
Telecommunications	2.16	8.9

Chart 2.11. Relative share of value added of non-dedicated support CIs

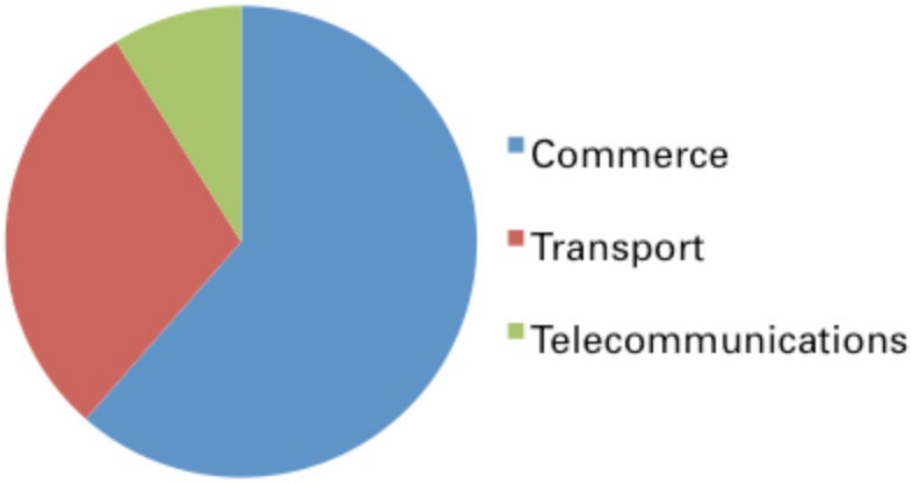
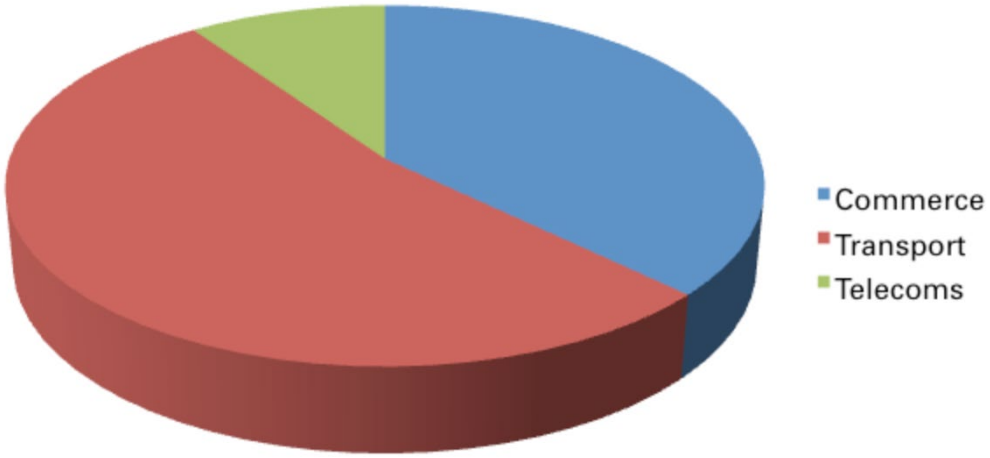


Table 2.14.b. Relative share of FTE employment of non-dedicated support CIs

Commerce	65	38%
Transport	93	54%
Telecoms	17	8%

Chart 2.12. Relative share of FTE employment of non-dedicated support CIs



2.3 Comparisons with recent French studies

In recent years, there have been many studies in France and other countries to determine the share of cultural and creative industries, although the concept of copyright has not come directly into play. It is therefore edifying to see the differences and similarities between these studies and the share of CIs, and to interpret them where necessary. The following information can be gleaned:

- The study by the Ministry of Culture produces limited figures, due both to the very narrow choice of cultural sectors and to the fact that no knock-on effect is taken into account for these sectors.
- The economic overview of cultural and creative industries in France published in November 2013 at the behest of France Créative, a platform of stakeholders in the cultural and creative industries, produces higher figures than previous reports, but lower figures than those generated by this study. It would appear that the difference could be explained partly by the decision not to include certain sectors (such as heritage), but mostly by the decision not to include upstream and downstream knock-on effects. Conversely, it is notable that the difference is much smaller for employment than for value added, which is already an indicator of a feature that will be highlighted in the following chapter: CIs mobilize relatively more jobs in terms of value added than the rest of the economy. This feature will need clarification.
- The report of the culture and finance inspectorates is consonant with the share of CIs, although some of its figures are lower than the ones in this study. The figures provided in the report of the inspectorates are generated using a completely different methodology, given that the upstream and downstream effects are yielded by a multiplier which is not clearly taken into account. However, the report's estimate of the share of culture aside from the upstream and downstream effect is very close to that of core CIs, which means that there is a strong convergence of results at this stage. If the more exhaustive figure (culture + wider scope + cultural influence) is used, the resulting figures are comparable in terms of value added (more than three points); this is explained by the introduction of a category named cultural influence, which encompasses gastronomy, a part of food and beverage service activities. However, the difference for employment remains significant, except for the culture item (about 600,000 jobs). Also, the report does not analyze in depth the weight of employment outside the hard core of culture.

2.3.1 *Statistical analysis of the Department for Planning, Strategic Foresight and Statistics (DEPS)*

The framework adopted by the DEPS (Ministry of Culture and Communication) departs from the traditional approach of the Ministry by adding advertising and photography to the cultural sectors, but not retail sale, rental of cultural goods and translation and interpretation activities. In so doing, it relies on the approach adopted by the ESSnet culture group, which started to offer a coordinated view of culture in European countries back in 2009. ESSnet postulated that six activity groups underpinned the cultural sector: heritage, archives, libraries, books and press publications, visual arts, architecture, stagecraft, audio/audiovisual and multimedia.[3] Two new areas have been added: advertising, with the activities concerned being included solely in terms of creation, thereby excluding the production of advertising material and marketing; and the production of original craft objects. These eight areas are then matched with functions: preservation, creation, production, distribution, trade and education, administration and regulation (see Table 2.15).

[3] (Culture Études n° 20118, *"Approche statistique européenne de la culture, Synthèse des travaux européens ESSnetCulture, 2009-2011").*

Table 2.15. Components of culture sector according to the Ministry of Culture (DEPS)

Audiovisual:
58.21Z – Publishing of computer games
59.11A – Production of motion pictures and cinematographic programs, for television
59.11B – Production of institutional and promotional motion pictures
59.11C – Production of motion pictures for cinema
59.12Z – Post-production of cinematographic motion pictures, and music editing of video and television programs
59.13A – Motion pictures for cinema distribution
59.13B – Video editing and distribution
59.14Z – Motion picture projection activities
59.20Z – Sound recording and music publishing activities
60.10Z – Radio broadcasting
60.20A – Publishing of general channels
60.20B – Publishing of specialized channels
Architecture:
71.11Z – Architectural activities
Book and press:
58.11Z – Book publishing
58.13Z – Publishing of newspapers
58.14Z – Publishing of journals and periodicals
63.91Z – News agency activities
Advertising
73.11Z – Advertising agencies
Visual arts:
74.10Z – Specialized design activities
74.20Z – Photographic activities
90.03A – Artistic creation related to fine arts
90.03B – Other artistic creation
Cultural education:
85.52Z – Cultural education
Live performance:
90.01Z – Performing arts
90.02Z – Support activities to performing arts
90.04Z – Operation of arts facilities
Heritage:
91.01Z – Management of libraries and archives
91.02Z – Museums activities and natural reserves cultural activities
91.03Z – Operation of historical sites and buildings and similar visitor attractions

The DEPS therefore measures the value added of these sectors at 40 billion euros (2.2 per cent of GDP) and production at 85 billion euros, 4.67 per cent of total production.

It is evident that only the first figure is well-grounded.[4] This figure is markedly lower than the relevant figure in this study, that is, the share of core CIs (67.9 billion euros). However, the difference reduces if software activities, which account for nearly 28 billion, are added following the method recommended by WIPO.

2.3.2 *Economic overview of cultural and creative industries in France (Panorama économique des industries culturelles et créatives en France)*

An *Economic overview of cultural and creative industries in France* was published in November 2013 at the behest of France Créative, a platform of stakeholders in the cultural and creative industries. The platform brings together ADAGP, ADAMI, the Association of General and Political Information Press Organs (Association IPG), the Association of Online Music Services Publishers (ESML), the Federation of Live Performance, Music, Audiovisual and Cinema Companies (FESAC), the Partnership of Cinema and Television Producers (PROCIREP), the National Syndicate of Producers, Broadcasters and Performance Facilities (PRODISS), SACEM, the National Publishing Syndicate (SNE), the National Phonograph Publishing Syndicate (SNEP), the National Video Games Syndicate (SNJV), the SPPF and the Union of Independent French Phonograph Producers (UPFI).

This overview is intended to reflect the emergence of the concept of creative industries in France and, although this is not clearly stated, to the economic importance of copyright. It is also worth noting that practically all the supporters of the study were, broadly speaking, collective copyright management societies. In fact, as Table 2.16 shows, these are mostly industries that create copyright, but not those whose *modus operandi* is linked to the existence of copyright.

The size of cultural and creative industries is calculated at 75 billion euros, 3 per cent of total turnover. This is therefore a completely different – and fairly doubtful – basis, given than the correct value to use for a proper calculation is value added and not the total (intermediate consumption + value added). The only figure to which this estimate might be compared is that for core CIs, which is 67.9 billion, but this is not relevant for two reasons: firstly, the variable here is value added; and, secondly, software is included. It probably also means that this figure might be higher if value added were compared and it would be somewhat closer to the estimate provided in this study, because creative and cultural industries generally have a higher value added for a given turnover, given that they are more labor- than capital-intensive.

However, this is not sufficient explanation for the difference. It appears to result from two reductions:

- The scope of cultural industries includes cultural industries and live performances.
- The scope of upstream and downstream effects, since only the sectors *per se* are considered, independently of their knock-on effects. This second reduction is partly offset by an implicit use of multiplier effects. However, this weak effect (a 17 per cent increase) is not made clear because the methodology is insufficiently rigorous.

Table 2.16. Overview of all creative cultural industries by France Créative

	Visual arts	Music	Live performances	Cinema	Television	Radio	Games	Books	Press	Total
Turnover	**19.8**	**8.6**	**8.4**	**4.4**	**14.9**	**1.6**	**5**	**5.6**	**10.7**	**74,618**
Direct	18.7	6.0	6.0	4.0	10,000	1.3	3.6	5,095	10,400	**61,425**
Others	1.1	2.6	2.4	1.0	4,000	0.3	1.4	520	300	**13,193**
Employment	**307,000**	**240,874**	**267,713**	**105,890**	**176,467**	**17,450**	**23,635**	**79,613**	**101,933**	**1,228,255**
Direct	298,000	233,000	249,000	102,000	134,900	16,500	18,500	71,416	89,514	**1,124,089**
Others	9,000	7,000	18,000	4,000	41,500	950	5,135	8,197	12,419	**104,166**

Source: *Le Panorama économique des industries culturelles et créative en France* (Economic overview of cultural and creative industries in France), November 2012

[4] *Le poids économique direct de la culture*, Yves Jauneau, Culturechiffres no. 20133, September 2013: http://www.culturecommunication.gouv.fr/Politiques-ministerielles/Etudes-et-statistiques/Publications/Collections-de-synthese/Culture-chiffres-2007-2015/Le-poids-economique-direct-de-la-culture-CC-2013-3.

2.3.3 *The report of the finance and culture inspectorates*

This report defines culture based on four sub-systems, which yields four general indicators: the scope of culture, the contribution of culture to the economy, total production and, finally, the cultural influence effect.[5]

The scope of culture

The first sub-group concerns partial or wholly cultural activities, which end up being considered wholly cultural activities if a *pro-rata* calculation is used. Specifically, cultural activities produce cultural goods and services corresponding to the 49 codes of the French Code of Description of Activities (NAF codes). Forty-one of these activities are strictly cultural and eight are partially cultural, which would give them a weight lower than 100 per cent. Except for a few sectors, this group corresponds to the group of core and partial copyright industries as defined by WIPO, although the sector transcends certain cultural boundaries in the strict sense and, conversely, as with some building work, cultural undertakings do not always give rise to copyright. Their contribution is therefore composed of the value added of activities that are specifically cultural (40 billion euros) and other cultural activities (4.5 billion euros), for a total of 44.5 billion euros, 2.5 per cent of the general value added generated by the French economy.

However, in addition to "specifically cultural" production and dissemination activities, there are other activities which are sufficiently interdependent with specifically cultural activities to be defined as "indirectly" cultural (share of public works and building companies specialized in the restoration of built-up heritage, cultural sections of supermarkets, etc.). Indirect cultural activities are not cultural by nature, but acquire this feature from cultural activities taking place upstream and downstream. They include:

– Activities allowing production in cultural industries (paper, printing presses, etc.) and the preservation of built-up heritage (buildings, works).

– Activities allowing distribution, commerce and repairs, of which there are 50. The analysis is different from that of copyright, since it affects both the interdependent and non-dedicated support copyright industries.

This indirect sub-group accounts for 13.3 billion euros in value added and 0.7 per cent of the total value added in the French economy. When combined with the preceding sub-group, this yields value added of 57.2 billion euros, 3.2 per cent of GDP (see Table 2.17.a). This "specific-indirect" group therefore makes it possible to determine the *scope of culture in France*.

Table 2.17.a. Value added in 2011 (billion euros)

	Absolute value	%
Live performance	8.8	0.5
Heritage	8.1	0.4
Visual arts	5.7	0.3
Press	5.7	0.3
Books	5.5	0.3
Audiovisual	5.1	0.3
Advertising	5.1	0.3
Architecture	4.4	0.2
Cinema	3.6	0.2
Sound and image industries	3.4	0.2
Access to knowledge and culture	2.3	0.1
Total	**57.8**	**3.2**

Source: *L'apport de la culture à l'économie en France* (Contribution of culture to the French economy), *General Inspectorate of Finance and General Inspectorate of Culture, November 2013*.

[5] Source: *L'apport de la culture à l'économie en France* (Contribution of culture to the French economy), General Inspectorate of Finance and General Inspectorate of Culture, November 2013.

Cultural activities (both direct and partial) generate 670,000 jobs, both cultural and non-cultural, accounting for 2.5 per cent of total employment in 2010 (see Table 2.18.b). A previous study had demonstrated in this regard that this figure corresponds more or less only to cultural jobs: while some of the technical or administrative jobs will need to be subtracted, it is also worth noting that non-cultural activity sectors can also be subtracted. This correspondence fails when the category is extended to cover sectors beyond the cultural sector, since sectors with a high non-cultural employment component will necessarily be included. The figures are thus exaggerated, even though an example to the contrary can be found in heritage because, as of 2004, the Ministry of Culture had validated figures quite a bit higher than those presented below. According to the Ministry of Culture, specifically cultural activities account for 630,000 jobs and indirect cultural activities account for 31,712 jobs. The largest cultural sectors are live performances (150,000 jobs), followed by advertising (100,000) and press (87,000).

Table 2.17.b. Trends and role of cultural employment

	2008	2010	Trend	% Culture	% France
Live performance	145,009	148,098	2.1%	22%	0.6%
Advertising	95,994	100,246	4.4%	15%	0.4%
Press	92,716	86,796	-6.4%	13%	0.3
Architecture	69,190	71,495	3.3%	11%	0.3%
Visual arts	65,423	69,243	5.8%	10%	0.3%
Audiovisual	47,669	49,514	3.9%	7%	0.2%
Access to knowledge	31,053	34,907	12.4	5%	0.1%
Books	33,932	33,871	-0.2%	5%	0.1%
Cinema	32,185	33,108	2.9%	55	0.1%
Heritage	24,735	24,641	-0.4%	4%	0.1%
Audio industries	17,883	17,064	-4.6%	3%	0.1%
Grand total	**655,841**	**668,977**	**2.0%**	**100%**	**2.5%**

Source: *L'apport de la culture à l'économie en France* (Contribution of culture to the French economy), General Inspectorate of Finance and General Inspectorate of Culture, November 2013.

If interdependent jobs were included (plus 100,000), the figure advanced in this report would be 770,000. This number of cultural jobs rose 3.4 per cent between 2008 and 2010, meaning that indirect cultural jobs increased much more quickly than cultural jobs.

Total cultural production

At this juncture, the report included another indicator, total cultural production, which in fact consists of adding value added to turnover, including the corresponding intermediate consumption. To the 57.8 billion euros of value added, 72 billion euros in intermediary consumption are added, representing 44.7 per cent of value added. This calculation, which subsumes indicators to the degree of economic concentration, does not appear to be greatly relevant.

The contribution of culture to the economy

A third sub-group is for induced activities or the intermediary consumption of cultural activities. This is close to non-dedicated support activities, but here too, there is an overlap between non-dedicated support and interdependent activities. They account for 46.7 billion euros, which means that, in terms of value, specifically cultural activities generate almost as much value added (44.5 billion euros) as induced activities (46.7 billion euros).

The contribution of culture can thus be defined as adding the weight of induced activities to the previously defined scope of the economy. This corresponds to the sum of cultural and culturally-induced activities, that is 104.5 billion euros, the equivalent of 5.8 per cent of the sum of value added in 2011.

Cultural influence

A fourth sub-group is activities that enhance the attractiveness and influence of French culture. This refers to four areas: fashion; luxury; decorative arts; and gastronomy. The study made a subjective selection of 44 NAF codes. The corresponding final figure is 40.3 billion euros, but it cannot be added to the previous figure because of the risk of duplication. It is an indicator of "influence".

Activities linked to cultural influence thus account for 1,034,000 jobs in 2010, a 1 per cent increase between 2008 and 2010. The most intensive employment activity is traditional catering, with 390,000 jobs in 2010. However, there are doubts regarding the appropriateness of linking restaurants to culture.

Table 2.17.c. Summary of the study by the two ministerial inspectorates

	Value added	Percentage of GDP	Employment
Culture	44.5	2.5	668,977
Cultural scope (Culture + interdependent activities)	57.8	3.2	
Contribution of culture to economy (Cultural scope + induced effects)	104.2	5.8	
Cultural influence	40.3	2.26	1,034,000

Source: *L'apport de la culture à l'économie en France* (Contribution of culture to the French economy), General Inspectorate of Finance and General Inspectorate of Culture, November 2013.

The methodology used in this study is not always stated, so it is difficult to compare its results with those of the present study. However, even if they do not clearly state so, the authors of this report appear to have been aware of the WIPO work and guidelines but decided not to follow them.

Comparison of the result of the study of the two inspectorates and the WIPO study

Although the two studies have quite different initial approaches, it might be worth comparing all their results. The comparison is highly edifying regarding what might be termed the core activities, but considerably less so regarding the "across-the-board" extension of the study by the General Inspectorate of Finance (IGF).

- As regards the core, which in this case is "culture", it is striking to note the close proximity of what the IGF study considers core activities and what the WIPO guide considers core CIs. In the IGF study, the core accounts for 3.2 per cent of value added, amounting to 57.8 thousand million euros. If the WIPO methodology is applied to the French data, core CIs will account for 3.6 per cent of value added (3.3 per cent of GDP after the correction in 2012, amounting to 67.9 thousand million). In fact, bearing in mind that the IGF calculates architecture, but not software, in a broad sense and that WIPO includes software in a broad sense but not architecture, the resulting sizes are almost equal. The difference between software (28 billion) and architecture (17.9 billion) therefore explains why the WIPO figure is significantly higher, by 10.1 billion, which is the difference between the two aggregate sizes (67.9 – 57.8).
- However, the two studies differ in how they take account of the other activities. Whereas the WIPO method proceeds according to sector by treating industries differently depending on their proximity to copyright, the IGF takes an entirely different tack by introducing intermediary consumption and taking account of the influence factor, mainly in relation to hotels and food and beverage service activities. At that point, it is obviously impossible to make comparisons.

2.4 Comparisons with other studies per country by the World Intellectual Property Organization

The economic contribution of CIs in France can also be compared to those of other countries studied by WIPO, of which to date there are almost 50.

- The available data shows that in terms of percentage of value added, France was in fifth place in 2012, behind the United States of America (nearly 11 per cent), the Republic of Korea (nearly 10.5 per cent), Saint Lucia (nearly 9 per cent) and Hungary (nearly 7.5 per cent) and probably ahead of Hungary if value added, rather than just GDP, had been used. Bearing in mind also that the global average was 5.2 per cent and that three quarters of the countries studied fall between 4 per cent and 6.5 per cent, France is a high performer. This is hardly surprising, given that France is in the so-called group of rich countries. The age and robustness of its copyright policy, combined with the status and the economic and legal protection that cultural activities have always enjoyed in the country have also contributed to its standing.

- In terms of FTE jobs, the performance is a little less good: France comes tenth, being outpaced by two other European countries, Hungary and Slovenia. Again, this performance is quite a bit higher than the average (7.29 per cent as against an average of 5.36).

- These trends can be seen in export and import percentages, although they are more nuanced. The external trade balance is negative, unlike for the United States of America. This negative balance, which also reflects a very bad year for external trade in France, is obviously a matter of concern for a country that emphasizes the importance of its artistic and research potential, which should give it a clear export advantage. This balance is explained by the below-par performance of partial CIs, which overshadow the performance of core CIs.

If the relative shares of CIs are considered, a number of lessons can be drawn.

- The core CIs reflect the general trends of the WIPO observations, but the value added of the software sector is particularly high. This might seem surprising in a sector in which cultural activities and industries are strongly emphasized in France, but it should be borne in mind that there are large subsidies in this sector, partly reducing their value added.

- For partial CIs, the situation is a little more complex. Since these CIs are highly sensitive to the development of the country, the percentages reflect development models rather more than specific approaches among copyright industries.

    - Thus, the contribution of architecture is relatively higher than in other countries, because of the strength of this sub-group.

    - Textiles and apparel have a smaller contribution in other countries, especially less developed countries, obviously because for a long time, these industries were concentrated in countries where labor costs were low.

    - The contribution of museums is lower than expected: while France has a very active museum policy, many of these museums receive budget and cash subsidies from the government, which probably reduces their contribution relative to other groups.

3. The dynamic of copyright industries

In France, copyright industries (CIs) accounted for 7.02 per cent of GDP, 7.29 per cent of the volume of full-time equivalent employment, 6.48 per cent of the number of persons engaged in an occupation, 9.54 per cent of exports and 11.46 per cent of imports in 2012. These figures are significant, and it might even be said that, compared to other countries, France is among the leading countries.

However, trends are also important and when they are analyzed, they add some perspective to these interpretations. An analysis of the statistical changes for CIs for 1999-2011 shows that, while they perform quite well during periods of economic growth, in this case during the 1999-2008 period, performance was less positive in the years following the 2007/2008 financial crisis. To demonstrate this assertion, the successive changes in value added, employment, labor productivity and exports will be analyzed, followed by a more general interpretation of these trends in France. This interpretation will be verified in the last chapter using specific analyses of certain sectors.

The 1999-2011 period was selected because its data are consistent. The data for 2012 came from a partial amendment as of 2008, published in May 2014, creating something of a leap between 2011 and 2012. It therefore seemed relevant to maintain a more or less homogeneous 12-year period to analyze dynamic trends, bearing in mind that in some cases the change in the 2012 base leads to differences in value between the statistical analysis in Chapter 2 and the dynamic analysis in Chapter 3.

3.1 Value added of CIs and their contribution to GDP

3.1.1 *Trends in the four components*

3.1.1.1 *Core CIs*

Table 3.1.a shows the trends in absolute value as a percentage of GDP and as an index of the contribution of core CIs to GDP. The basic figures calculated to yield this summary table are provided in the annex in Table 3.1.b.

Table 3.1.a. Role and trends in value added of core CIs in GDP (1999-2011)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Core	53.0	57.7	60.9	61.8	63.5	65.7	68.1	72.8	76.2	78.9	74.9	76.4	78.1
% core	3.87	4.00	4.00	4.00	4.00	3.96	3.96	4.04	4.04	4.09	3.97	3.94	3.89
Core ind.	100	108	114	116	119	123	128	137	143	148	141	144	147
Ind. GDP	100	105	109	113	116	121	125	131	137	141	137	141	146

Core: Value added of CIs in million euros
% core: Percentage of GDP
Index of core CIs, base 100 in 1999
GDP index, base 100 in 1999
Sources: Data from national accounts

As a percentage of GDP, core CIs therefore accounted for 3.87 per cent of GDP in 1999, rising slightly at the end of the period to 3.89 per cent. Their index (base 100 in 1999) in fact rose to 147 in 1999, as against 146 for GDP, which explains this slight variation in the percentage. However, this fairly good performance conceals an interesting development. When GDP was climbing most quickly, between 1999 and 2008, core CIs also made rapid progress and their index was 7 points higher than that of GDP. In 2008, their index stood at 148, compared to 141 for GDP, and the percentage of core CIs reached its maximum: 4.04 per cent. Conversely, during the crisis, core CIs lost a little ground compared to GDP, since the final index was 147 in 2011 for CIs and 146 for GDP. Obviously, there is a corresponding drop in the percentage of CIs in the economy, from 4.04 per cent in 2008 to 3.89 per cent in 2011. Core CIs overreact to growth: they make faster progress during growth periods but are slower during periods of downturn.

3.1.1.2 *Interdependent CIs*

Interdependent CIs behave very differently from the other CIs, as is illustrated by their index, which is 100 at the start of the period and falls to 75 at the end, with a concomitant drastic drop in their contribution to GDP (see Table 3.2.a). The basic figures calculated to produce this summary table are provided in the annex at Table 3.4.b. This general movement covers two distinct sub-periods. At the beginning of the decade, interdependent CIs maintained their contribution, which had begun to fall steadily from 2003, and this can therefore not be explained solely by the effects of the crisis, even if the crisis did establish the trend, as can be seen from the slump in their contribution from 2008. The explanation for this trend lies elsewhere: they either experienced very low productivity or the value added that they previously generated was absorbed into other industries, such as core CIs.

Table 3.2.a. Role and trends in value added of interdependent CIs in GDP (1999-2011)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Inter.	6.2	7.1	7	11.7	6.5	6.6	11.3	6.2	6.3	6	5.3	4.9	4.7
% inter.	0.45	0.49	0.47	0.75	0.41	0.4	0.65	0.34	0.33	0.31	0.28	0.25	0.23
Inter. Ind.	100	114	112	188	104	106	182	100	101	96	85	79	75
Ind. GDP	100	105	109	113	116	121	125	131	137	141	137	141	146

Inter.: Value added of interdependent CIs in million euros
inter.: Percentage of Interdependent CIs in GDP
Index of interdependent CIs, base 100 in 1999
GDP index, base 100 in 1999
Sources: Data from national accounts

3.1.1.3 *Partial CIs*

The share of partial CIs in GDP remains stable: the percentage of 2.21 per cent at the start of the period is maintained at the end (see Table 3.3.a). The basic figures calculated to produce this summary table are provided in the annex at Table 3.3.b. The effect of the economic crisis is fairly strong: partial CIs held steady until 2008, but dropped significantly following the 2007/2008 crisis, with a drop to 2.15 per cent in 2009. In terms of indices, there was a shift, though much less noticeable, similar to that of core CIs. Between 2001 and 2003, partial CIs grew faster than GDP, reaching an index of 118 compared to 116 for GDP. However, with the coming of the crisis, their index fell to 139 while the GDP index continued to grow, albeit slowly, to 146. Thus, in a manner of speaking, there was an overreaction to the fall of partial CIs in response to the crisis. This can be explained in that core and partial CIs are risky and the partial CIs, which must rely on the short-term market, make for very prudent behavior. This also means that they should recover faster than core industries when international demand rises.

Table 3.3.a. Role and trends in value added of partial CIs in GDP (1999-2011)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Part.	30	31.6	33.5	34.3	35.7	36	36.7	38.8	40.9	43	40.6	40.3	42
% part.	2.21	2.21	2.22	2.22	2.22	2.17	2.13	2.15	2.17	2.22	2.15	2.21	2.21
Part. ind.	100	103	111	114	118	119	121	128	135	143	134	133	139
Ind. GDP	100	105	109	113	116	121	125	131	137	141	137	141	146

Part.: Value added of partial CIs in million euros
% part.: Percentage of partial CIs in GDP
Index of partial CIs, base 100 in 1999
GDP index, base 100 in 1999
Sources: Data from national accounts

3.1.1.4 *Non-dedicated support CIs*

These CIs are much less volatile than the others. Non-dedicated support CIs are not as volatile as core CIs but are more so than partial CIs, although they tend to grow at a slightly higher rate than GDP, explaining the minor shifts in their percentage: 0.95 at the end of the period as against 1.00 at the start of the period (see Table 3.4.a). The basic figures calculated to produce this summary table are provided in the annex at Table 3.4.b. During the growth phase, non-dedicated support CIs registered little progress: their index rose from 100 in 1999 to 141 in 2008, as against 149 for core industries and 143 for partial industries, but during the crisis, they fell significantly less than the others and even made some progress: the index rose from 141 to 143. This can of course be explained by the fact that they are also triggered by activities other than those giving rise to CIs, but this explanation is insufficient because all activities were affected by the crisis. Another explanation might be that non-dedicated support CIs benefit little from productivity gains.

Table 3.4.a. Role and trends of value added of non-dedicated support CIS in GDP (1999-2011)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Add.	13.4	13.8	14.8	15.7	16.3	16.8	17	17.3	18	19	18.8	18.9	19.2
% add.	1.00	0.90	1.00	1.02	1.03	0.10	0.10	0.96	0.95	0.99	1.00	0.97	0.95
Add. ind.	100	102	110	117	121	125	126	129	134	141	140	141	143
Ind. GDP	100	105	109	113	116	121	125	131	137	141	137	141	146

Add.: Value added of non-dedicated support CIs in million euros
% add.: Percentage of non-dedicated support CIs in GDP
Index of non-dedicated support CIs, base 100 in 1999
GDP index, base 100 in 1999
Sources: Data from national accounts

3.1.2 *Overall value added*

Table 3.5.a shows the aggregate value added of CIs in GDP and Table 3.5.b shows the percentages in terms of GDP and the corresponding indices (the basic calculations are provided in the annex at Table 3.5.f e).

Table 3.5.a. Role and trends in total value added of CIs in GDP (1999-2011)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Core	53.0	57.7	60.9	61.8	63.5	65.7	68.1	72.8	76.2	78.9	74.9	76.4	78.1
Inter.	6.2	7.1	7	11.7	6.5	6.6	11.3	6.2	6.3	6	5.3	4.9	4.7
Part.	30	31.6	33.5	34.3	35.7	36	36.7	38.8	40.9	43	40.6	40.3	42
Add.	13.4	13.8	14.8	15.7	16.3	16.8	17	17.3	18	19	18.8	18.9	19.2
Total CIs	**102.6**	**110.2**	**116.2**	**123.5**	**122.0**	**125.1**	**133.1**	**135.1**	**141.4**	**146.9**	**139.6**	**140.5**	**144.0**

Value added of CIs in million euros
Sources: Data from national accounts

Table 3.5.b. Trends in value added of CIs, their percentage of GDP and the corresponding indices

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
CIs	102.6	110.2	116.2	123.5	122.0	125.1	133.1	135.1	141.4	146.9	139.6	140.5	144.0
GDP	1.367.0	1.439.0	1.495.0	1.542.0	1.587.0	1.655.0	1.718.0	1.798.0	1.886.0	1.933.0	1.885.0	1.936.0	2.001.0
%	7.53	7.60	7.69	7.99	7.66	6.63	6.84	7.49	7.49	7.61	7.40	7.37	7.28
Ind. CIs.	100	107	113	120	118	121	129	131	137	143	136	136	140
Ind. GDP	100	105	109	113	116	121	125	131	137	141	137	141	146

CIs: Value added of CIs in million euros
GDP: Value of GDP
%: Percentage of CIs in GDP
Index of core CIs, base 100 in 1999
GDP index, base 100 in 1999
Sources: Data from national accounts

The share of CIs therefore falls during this period from 7.53 per cent in 1999 to 7.28 per cent in 2011 (Tables 3.5.b and 3.5.c.). The importance of this movement should probably not be overstated, but neither should it be overlooked. In fact, CIs came to a turning point in 2008. During the first phase (1999-2008), CIs grew faster than GDP, especially at the start of the period, such that their index was slightly higher (143 as against 141) and their share actually grew from 7.53 per cent to 7.61 per cent. However, the following three years saw a distinct reversal of this trend, with their share falling from 7.61 per cent to 7.28 per cent. In 2011, the CI index was 6 points behind GDP.

This is obviously a key development because it casts doubt on the supposition that CIs are spared the effects of a crisis and may even act as a shock absorber or be partly anti-cyclical. This does not appear to be the case for this data at least, and there are two possible explanations:

- The first is uncertainty. By definition, CIs correspond to high-risk and even uncertain activities, and risk-taking would obviously be less frequent during a period of crisis when market uncertainty is at its highest.
- The second is financing. Admittedly, investment is not necessarily high during the creative stage. This is because creativity relies on the mobilization of intangible capital, which often generates returns in terms of future earnings. However, the situation is entirely different when it comes to innovation, which follows, and in many cases may rely on, significant investments at a time when the cost of loans is high or credit is just not available.

Table 3.5.c. Value added of the various CIs as a percentage of GDP

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
% core.	3.87	4.00	4.00	4.00	4.00	3.96	3.96	4.04	4.04	4.09	3.97	3.94	3.89
% inter.	0.45	0.49	0.47	0.75	0.41	0.4	0.65	0.34	0.33	0.31	0.28	0.25	0.23
% part.	2.21	2.21	2.22	2.22	2.22	2.17	2.13	2.15	2.17	2.22	2.15	2.21	2.21
% add.	1.00	0.90	1.00	1.02	1.03	0.10	0.10	0.96	0.95	0.99	1.00	0.97	0.95
% CIs	**7.53**	**7.60**	**7.69**	**7.99**	**7.66**	**6.63**	**6.84**	**7.49**	**7.49**	**7.61**	**7.40**	**7.37**	**7.28**

Sources: Calculations from Table 3.5.a and data from national accounts

To explore these hypotheses a little further, it might be worthwhile to group CIs among themselves. Thus, core and partial CIs were merged into one group, while non-dedicated support and interdependent CIs were merged into another (see Tables 3.5.d and 3.5.e). This reveals that while the two new groups lose their weight in GDP, the "interdependent + non-dedicated support" group loses more weight than the "core + partial" group, that is, -1.16 per cent compared to 18.64 per cent. Nonetheless, this result does not invalidate the hypothesis that CIs are sensitive to crisis, because there is indeed a drop in the "core + partial" nucleus

from 2008 even though, again, this is in a proportion less than that of the fall of all CIs. Conversely, in the "interdependent + non-dedicated support" group, the interdependent component explains the fall (49 per cent during the entire period, with a 26 per cent drop during the crisis period alone) since the percentage of non-dedicated support industries is practically the only one not to register a fall both for the entire period and during the years of crisis. The theories of the weight of uncertainty and the difficulty of obtaining credit are not disproved, and the resilience of non-dedicated support industries can probably be explained by their dependence on very many other sectors of the economy, since a generally low percentage of their activities is devoted to CIs.

Table 3.5.d. Percentage of all core CIs + partial CIs in GDP

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
% core.	3.87	4.00	4.00	4.00	4.00	3.96	3.96	4.04	4.04	4.09	3.97	3.94	3.89
% part.	2.21	2.21	2.22	2.22	2.22	2.17	2.13	2.15	2.17	2.22	2.15	2.21	2.21
(C+P)	**6.08**	**6.21**	**6.22**	**6.22**	**6.22**	**6.13**	**6.09**	**6.19**	**6.21**	**6.31**	**6.12**	**6.15**	**6.10**

Source: Calculations based on Table 3.5.c.

Table 3.5.e. Percentage of all interdependent CIs + non-dedicated support CIs in GDP

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
% int.	0.45	0.49	0.47	0.75	0.41	0.4	0.65	0.34	0.33	0.31	0.28	0.25	0.23
% add.	1.00	0.90	1.00	1.02	1.03	0.10	0.10	0.96	0.95	0.99	1.00	0.97	0.95
(I + C)	**1.45**	**1.39**	**1.47**	**1.77**	**1.44**	**0.50**	**0.75**	**1.30**	**1.28**	**1.30**	**1.28**	**1.22**	**1.18**

Source: Calculations based on Table 3.5.c.

3.2 Employment

3.2.1 *Trends in the four components*

3.2.1.1 *Core CIs*

Employment in core CIs shows definite progress. The percentage of total employment rises from 3.42 per cent to 3.74 per cent, a 9 per cent increase. This is also manifested in the respective indices: 119 compared to 108, that is, nearly 11 index points more (see Table 3.6.a; for the basic calculations, see Table 3.6.b in the annex). This trend mirrors the trend in value added, but on a much broader scale, since the percentage growths (+9 per cent as against +0.02 per cent) and index growths (one index point more) are now significantly higher. A possible explanation is clearly that core CIs are "labor" industries, an argument often advanced in regard to cultural activities, whose main features are to be found in employment, in contrast to sectors described as industrial. This growth is also sufficiently strong that the effects of the crisis are reflected in a slowdown of the trend rather than its end, with 2010 being the only year that can be described as a crisis year. The difference between the two indices remains fairly marked throughout the crisis, which means that in employment terms, the drop in production does not appear to have had a significant impact on core CIs.

Table 3.6.a. Role and trends in employment in core CIs in total FTE employment (1999-2011)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Core E.	802	859	898	900	894	904	910	926	940	956	945	947	955
% TE	3.42	3.57	3.62	3.63	3.61	3.64	3.67	3.89	3.67	3.72	3.73	3.73	3.74
Ind. core E.	100	107	111	112	111	112.7	113	115	117	119	117	118	119
Ind. TE	100	102	104	105	105	105	106	107	109	109	108	107	108

E. core.: Employment in CIs in thousands
% TE: Percentage of total employment
Ind. core E.: Index of core CIs, base 100 in 1999
Total employment index, base 100 in 1999
Sources: Data from national accounts

3.2.1.2 *Interdependent CIs*

The situation here is completely different from the previous one. The characteristic of interdependent CIs in this case is found to be their loss of both absolute and relative value: their percentage of total employment falls from 0.54 per cent to 0.39 per cent, a loss of more than one third (see Table 3.7.a; for the base calculations, see Table 3.7.b in the annex). This loss is less than the loss in value added, which approaches 50 per cent. The same trend is found in the indices. From base 100 in 1999, the employment index rose to 108, while the index for interdependent CIs was 78. Hence, the effects of the crisis were felt relatively less keenly since the loss of ground by interdependent CIs began well before and can therefore be said to be a long-term trend. The only observation that can be made is that employment suffered less than value added. Another striking finding is that partial industries do not follow the trend of core industries, which show a more sustained upward shift in employment and greater resistance to economic vagaries. This may be because partial industries are much more "globalized" than core industries, which could mean that they are much more sensitive to shifts in the global economy, thereby amplifying national trends.

Table 3.7.a. Role and trends in employment in interdependent CIs in total FTE (1999-2011)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Inter. E.	127	130	132	127	123	117	113	113	113	112	103	100	100
% TE	0.5400	0.550	0.538	0.517	0.48	0.470	0.450	0.450	0.440	0.430	0.400	0.39	0,39
Ind. inter. E.	100	102	103	100	96	92	89	89	89	88	81	78	78
Ind. TE	100	102	104	105	105	105	106	107	109	109	108	107	108

Inter. E.: Employment in interdependent CIs in thousands
% TE.: Percentage of Interdependent CIs in employment
Ind. inter. E.: Index of interdependent CIs, base 100 in 1999
TE Ind.: Total employment index, base 100 in 1999
Sources: Data from national accounts

3.2.1.3 *Partial CIs*

Employment in partial industries is midpoint between the previous two: there has been neither progress nor a substantial drop; instead there has been a certain degree of stability, as evidenced by change in its share of total employment, which edged down from 1.82 per cent to 1.78 per cent, a fall of nearly 0.5 per cent (see Table 3.8.a; the base calculations are found in Table 3.8.b in the annex). This lag behind total employment is reflected in the relative changes in the indices: while the total employment index stood at 108 in 2011, the index for partial CIs was at 105. This trend closely follows changes in value added for partial CIs. However, at the start of the period, that is between 2000 and 2003, which were the growth years, employment in partial CIs grew faster than total employment, and it was in fact the crisis years that leached off this growth and actually caused interdependent CIs to lose ground. In this case, it might be said that, while partial industries

amplify the effects of crisis, they also amplify the effects of growth, which can be explained by two of their features: they rely on considerable risk-taking and they have a high labor content.

Table 3.8.a. Role and trends in employment in partial CIs in total FTE employment (1999-2011)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Part. E.	428	456	461	459	458	452	442	450	460	464	446	444	458
% TE	1.82	1.89	1.88	1.86	1.85	1.82	1.77	1.78	1.80	1.80	1.76	1.71	1.78
Ind. part. E.	100	106	107	107	107	105	103	105	107	108	104	103	105
Ind. TE	100	102	104	105	105	105	106	107	109	109	108	107	108

Part. E.: Partial CI employment in thousands
% TE: Percentage of partial CIs in total employment
Ind. part. E.: Index of partial CIs, base 100 in 1999
Ind. TE: Index of total employment, Base 100 in 1999
Sources: Data from national accounts

3.2.1.4 *Non-dedicated support CIs*

Non-dedicated support CIs have a different profile from all the other CIs, showing moderate growth throughout the entire period, including during the crisis years (see Table 3.9.a; for the base calculations, see Table 3.9.b in the annex). This moderation can be seen in the changes in their percentage of total employment, which soars 4.4 points from 1.50 per cent to 1.57 per cent, and in the 5-point difference between the respective indices (113 and 108). Closer scrutiny of this change shows progress at the start (between 2002 and 2005), after which non-dedicated support CIs maintain their position. There are two possible reasons for this behavior: these non-dedicated support industries are linked to all the other sectors of the economy, meaning that they mimic overall trends. Moreover, they include the transport and telecommunications sector, in which jobs are often more secure than elsewhere.

Table 3.9.a. Role and trends in employment in non-dedicated support CIs in total FTE employment (1999-2011)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Com.	352	361	372	380	388	387	385	388	394	395	393	396	400
% GDP	1.50	1.49	1.51	1.53	1.56	1.56	1.54	1.53	1.54	1.53	1.55	1.56	1.57
Ind. ND. E.	100	102	105	107	110	109	109	110	112	112	111	112	113
Ind. TE	100	102	104	105	105	105	106	107	109	109	108	107	108

Com.: Employment if non-dedicated support CIs in thousands
% GDP: Percentage of non-dedicated support CIs in total employment
Ind. ND. E.: Index of non-dedicated support CIs, base 100 in 1999
Ind. TE.: Index of total employment, base 100 in 1999
Sources: Data from national accounts

3.2.2 *Major employment trends*

The general trend is an increase in employment, from 7.28 per cent of total employment to 7.49 per cent. This progress cannot be automatically explained by the rise in unemployment, given that the CIs index is at 111 compared to 108 for total employment (see Tables 3.10.a, b, and c).

This trend in employment is therefore different from the trend in value added. While the percentage of CIs in employment grew by 2.89 per cent during that period, the percentage of CIs in value added fell by 4.88 per cent. While the percentage of CIs in employment is 1 point higher than the index for total employment, the index of CIs in value added is 9 points lower than that for total value added. Thus, there is a significant scissor effect. Nonetheless, it is noteworthy that value added grows faster than employment for all CIs: 138 compared to 111. This is therefore a complex result, which suggests two scenarios: either a stagnation of

productivity within CIs; or less dynamism than might have been expected from CIs in relation to the rest of the economy. This may be only a false paradox, which will be discussed later.

Table 3.10.a. Trends in number of CI jobs by sub-group (1999-2011)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Core	802	859	898	900	894	904	910	926	940	956	945	947	955
Inter.	127	130	132	127	123	117	113	113	113	112	103	100	100
Part.	428	456	461	459	458	452	442	450	460	464	446	444	453
Add.	352	361	372	380	388	387	385	388	394	395	393	396	400
CIs	**1,709**	**1,806**	**1,863**	**1,866**	**1,863**	**1,860**	**1,850**	**1,877**	**1,907**	**1,927**	**1,887**	**1,887**	**1,908**

Employment in CIs in thousands
Source: Data from national accounts

Table 3.10.b. Percentage of employment of CI sub-groups in total employment (1999-2011)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Core	3.42	3.57	3.66	3.64	3.64	3.64	3.64	3.66	3.67	3.72	3.73	3.73	3.74
Inter.	0.54	0.55	0.54	0.52	0.48	0.47	0.45	0.45	0.44	0.43	0.40	0.40	0.40
Part.	1.82	1.89	1.88	1.86	1.85	1.82	1.77	1.78	1.80	1.80	1.76	1.71	1.78
Add.	1.50	1.49	1.51	1.53	1.56	1.56	1.54	1.53	1.54	1.53	1.55	1.56	1.57
CIs	**7.28**	**7.50**	**7.59**	**7.55**	**7.58**	**7.49**	**7.40**	**7.42**	**7.45**	**7.48**	**7.44**	**7.39**	**7.49**

Calculation in percentage of CIs from Table 3.10.a.
Source: Data drawn from national accounts

Table 3.10.c. Volumes and employment indices in CIs and in total employment (1999-2011)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
TE	23.431.1	24.068.2	24.517.0	24.720.4	24.758.9	24.802.4	24.971.9	25.257.1	25.595.8	25.685.2	25.289.6	25.282.2	25.468.1
TE. Ind.	100	102	104	105	105	105	106	107	109	109	108	107	108
CIs	1709	1806	1863	1866	1863	1860	1850	1877	1907	1927	1887	1887	1908
E. Ind. CIs	100	105	109	109	109	108	108	109	111	112	110	110	111

TE: Total employment in thousands
Index of total employment, base 100 in 1999
CIs: Volume of employment in CIs in thousands
Index of CIs, base 100 in 1999
Sources: Data from national accounts

To further explore this result, the two previously identified CI sub-groups will be used. The [core + partial] sub-group accounts for 73 per cent of employment in CIs and for 82 per cent of value added (see Table 3.10.d). Conversely, the [interdependent + non-dedicated support] sub-group accounts for 27 per cent of employment, as against 18 per cent of value added (see Table 3.10.e). In the first sub-group, it can be seen that the core CIs are responsible for the increase, with partial CIs, on the contrary, registering a slight drop. In the second sub-group, the difference is clear, with non-dedicated support CIs growing while interdependent CIs fall, with a slightly negative balance. The driver of employment in this instance clearly appears to be core CIs.

Table 3.10.d. Share of employment of core and partial CIs in total employment (1999-2011)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Core	3.42	3.57	3.66	3.64	0.08	3.64	3.64	3.66	3.67	3.72	3.73	0.08	3.74
Part.	1.82	1.89	1.88	1.86	1.85	1.82	1.77	1.78	1.80	1.80	1.76	1.71	1.78
C + P	**5.24**	**5.46**	**5.54**	**5.50**	**1.93**	**5.46**	**5.41**	**5.44**	**5.47**	**5.52**	**5.49**	**1.79**	**5.52**

Source: Calculations based on Table 3.10.b.

Table 3.10.e. Share of employment of interdependent and non-dedicated support CIs in total employment (1999-2011)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Inter.	0.54	0.55	0.54	0.52	0.08	0.47	0.45	0.45	0.44	0.43	0.40	0.40	0.40
ND.	1.50	1.49	1.51	1.53	1.56	1.56	1.54	1.53	1.54	1.53	1.55	1.56	1.57
I + A	**2.04**	**2.04**	**2.05**	**2.05**	**1.64**	**2.03**	**1.99**	**1.98**	**1.98**	**1.96**	**1.95**	**1.96**	**1.97**

Source: Calculations based on Table 3.10.b.

3.3 Apparent productivity of labor

Analyses of the productivity of factors of production are particularly complex in an area that is founded on creativity and harks back not to intrinsic features of employment or to specific forms of labor, but to situations which combine both qualified and unqualified jobs. To this end, the treatment of the data will be simplified, without significant departures from the base statistics. The simplest approach would be to analyze, both for each CI category and for all CIs, the relationships between changes in value added and changes in the number of jobs. This is therefore just the apparent productivity of the labor factor and the approach taken is somewhat as if all productivity gains were being ascribed to the labor factor, which is again particularly heterogeneous in this instance.

3.3.1 *Apparent productivity of labor in CIs*

It can be said that, taken as a whole, CIs are less productive than the average of the entire economy, with the average productivity gains arising from labor productivity, which stands at 1.1 per cent, as against 2 per cent for the entire economy. Table 3.11 further shows that this position is practically chronic, except for two crisis years (2008 and 2009), which means that the profile of CIs mirrors the economic profile, but to a lesser extent.

Table 3.11. Comparative productivity gains of CIs and the economy

Year	Annual CIs gain	Annual economic gain
2001	0.2	0.8
2002	0.6	2.9
2003	-0.1	0.8
2004	0.3	0.7
2005	0.7	1.4
2006	0.0	2.9
2007	0.3	0.2
2008	0.3	-0.8
2009	-0.3	-0.4
2010	0.1	1
2011	0.1	1.4

Source: Calculated from national statistics and value added data from national accounts, 2001-2011

Table 3.12 explains the logic behind these, albeit slim, productivity gains.

- In the first period (1999-2007), excluding the year 2003, productivity gains resulted from growth in value added which, together with slower growth in employment, somehow generated an increase in productivity.
- In the second period, even though value added declined until it virtually reached its initial level, employment remained practically stable, thus driving down productivity, in contrast to the situation at the beginning of the period.

All through the period, CIs reacted timidly to the general economic trends, either because they did not know how to accelerate growth in value added or because they chose to maintain a high level of employment. Meanwhile, there are a certain number of cultural activities which do not necessarily disappear in times of crisis and whose employment levels are not necessarily sensitive to fluctuations in economic activity.

Table 3.12. Trends in the apparent productivity of labor of CIs (1999-2011)

	VA	Jobs	VA/Jobs	Av. prod. index	Marginal prod. index
1999	102.6	1709	0.060	100	
2000	110.2	1806	0.061	102	**0.02**
2001	116.2	1863	0.062	102	**0.02**
2002	123.5	1866	0.066	106	**0.06**
2003	122	1863	0.065	99	**0.01**
2004	125.1	1860	0.067	103	**0.03**
2005	133.1	1850	0.072	107	**0.07**
2006	135.1	1877	0.072	100	**0.00**
2007	141.4	1907	0.074	103	**0.03**
2008	146.9	1927	0.076	103	**0.03**
2009	139.6	1887	0.074	97	**0.03**
2010	140.5	1887	0.074	101	**0.01**
2011	144	1908	0.075	101	**0.01**

VA: Value added of CIs in billion euros
Jobs: Number of CI jobs in thousands
VA/Jobs: Ratio of value added to employment for CIs
Average prod. index: Average productivity index of CIs (apparent productivity of labor)
Marginal prod. index: Marginal productivity index of CIs (apparent productivity of labor)
Sources: Calculations based on the employment and value-added statistics from national accounts, 1999-2011

The data collected on the employment trends of cultural industries in France (which are similar to core CIs) can be used to illustrate this last point.[6] As Table 3.13 shows, from 1996 to 2008, a period comparable to the study period, the average annual GDP growth rate of 2.07 per cent corresponded to a growth rate of 1.09 per cent for total employment, 1.6 per cent for cultural employment and 1.83 per cent for cultural professions. It is evident, therefore, that cultural employment is probably less sensitive to economic fluctuations than GDP, and this explains the relatively poor performance in apparent labor productivity.

Table 3.13. Average annual growth rates of the different types of cultural jobs

In percentage (%)	GDP	Total employment	Cultural employment (sector)	Cultural employment (professions)
1975-2008	2.22	0.57	1.66	1.67
1996-2008	2.07	1.09	1.60	1.83

Source: Ben Salem, M., Greffe, X. and Simonnet, V., *Culture et croissance: les leçons de l'expérience française (1975 – 2008)*, p 22.

3.3.2 *Apparent productivity of labor of CI sub-systems*

Core CIs grow at an average annual rate of 1.25 per cent, which is below the average labor productivity of the economy (slightly over 2 per cent), but higher than the aggregate rate for all CIs (see Table 3.11). Their growth rate is fairly steady, unlike other CIs, except that during crisis periods it levels off and even declines by one point. Consequently, it can be said that traditional assumptions about cultural sector productivity apply to core CIs. According to these assumptions, the low substitution of capital for labor, the magnitude of certain fixed labor costs and the existence of irrecoverable costs render this sector traditionally less productive than the economy. The expression "cost disease" has been coined to describe this phenomenon. Yet, the core CIs sector is certainly the subset that is most similar to the cultural activities sector. However, this is

[6] Ben Salem, M., Greffe, X. and Simonnet, V., *Culture et croissance: les leçons de l'expérience française (1975 – 2008)*, DEPS, Ministry of Culture.

not true for all branches of core CIs. There are indeed significant variations from one activity to another, as confirmed by the study conducted in France by the Ministry of the Economy and the Ministry of Culture, and as shown in Table 3.14.

Table 3.14. Trends in the apparent productivity of labor of core CIs (1999-2011)

Year	VA	Jobs	VA/Jobs	Av. prod. index	Marginal prod. index
1999	53	802	0.0661	100	
2000	57.7	859	0.0672	102	1.6%
2001	60.9	898	0.0678	103	1.0%
2002	61.8	900	0.0687	104	1.3%
2003	63.5	894	0.0710	107	3.4%
2004	65.7	904	0.0727	110	2.3%
2005	68.1	910	0.0748	113	3.0%
2006	72.8	926	0.0786	119	5.1%
2007	76.2	940	0.0811	120	3.1%
2008	78.9	956	0.0825	125	1.8%
2009	74.9	945	0.0793	120	4.0%
2010	76.4	947	0.0807	122	1.8%
2011	78.1	955	0.0818	124	1.4%

VA: Value added of core CIs in billion euros
Jobs: Number of jobs for core CIs in thousands
VA/Jobs: Ratio of value added to employment ratio for core CIs
Average prod. index: Average productivity index of core CIs (apparent productivity of labor)
Marginal prod. index: Marginal productivity index of core CIs (apparent productivity of labor)
Sources: Calculations based on employment and value-added statistical series for essential industries, according to national accounts, 1999-2011

The productivity of interdependent CIs is globally zero (the apparent productivity index having declined from 100 in 1999 to 97 in 2011) and will evidently reduce the aggregate productivity of CIs (see Table 3.15). This is compounded by the fact that it is highly irregular since it exhibits a cyclical movement, peaking twice in 2004, essentially due to a decline in employment, before plunging to 99 in 2011 due to a decrease in value added. It can therefore be said that productivity evolved mechanically for a comparable level of activity in phase one but then declined in phase two on account of the reduction in value added.

Table 3.15. Trends in the apparent productivity of labor for interdependent CIs (1999-2011)

Year	VA	Jobs	VA/Jobs	Av. prod. index	Marginal prod. index
1999	6.2	127	0.048	100	
2000	7.1	130	0.054	113	11.9%
2001	7	132	0.053	110	2.9%
2002	6.9	127	0.054	113	2.5%
2003	6.5	123	0.052	110	2.7%
2004	6.6	117	0.056	117	6.7%
2005	6.3	113	0.055	116	1.2%
2006	6.2	113	0.054	114	1.6%
2007	6.3	113	0.055	116	1.6%
2008	6	112	0.053	111	3.9%
2009	5.3	103	0.051	107	3.9%
2010	4.9	100	0.049	102	4.8%
2011	4.7	100	0.047	97	4.1%

VA: Value added of interdependent CIs in billion euros
Jobs: Number of jobs for interdependent CIs in thousands
VA/Jobs: Ratio of value added to employment for interdependent CIs
Average prod. index: Average productivity index for interdependent CIs (apparent productivity of labor)
Marginal prod. index: Marginal productivity index for interdependent CIs (apparent productivity of labor)
Sources: Calculations based on the employment and value-added statistical series for interdependent industries, according to national accounts, 1999-2011

Partial CIs record the highest productivity gains among all the CIs. Even so, these gains are lower than the economy's apparent productivity of labor (1.8 as opposed to 2.4) but higher than those of CIs (1.25) (see Table 3.16). Moreover, they tend to rise steadily throughout the period and are not really affected by the crisis because value added declines in tandem with employment. Consequently, the profile of partial CIs is evidently different from that of essential CIs. The gains are not only higher (an index of 133 compared to 123), but their profile over time is also aligned with that of the economy in general, undoubtedly because partial CIs develop activities which are closer to existing markets and are unaffected by the cost disease hypothesis.

Table 3.16. Trends in the apparent productivity of labor for partial CIs

Year	VA	Jobs	VA/Jobs	Av. prod. index	Marginal prod. index
1999	30	428	0.07009346	100	
2000	31.6	456	0.06929825	98	1.13
2001	33.5	461	0.07266811	103	4.48
2002	34.3	459	0.07472767	106	2.83
2003	35.7	458	0.0779476	111	4.3
2004	36	452	0.07964602	113	2.17
2005	36.7	442	0.08303167	118	4.42
2006	38.8	450	0.08622222	123	3.84
2007	40.9	460	0.08891304	127	3.12
2008	43	464	0.09267241	132	4.22
2009	40.6	446	0.09103139	130	1.77
2010	40.3	444	0.09076577	129	0.29
2011	42	453	0.09271523	132	2.14

VA: Value-added of partial CIs in billion euros
Jobs: Number of jobs for partial CIs in thousands
VA/Jobs: Ratio of value added to employment for partial CIs
Average prod. index: Average productivity index for partial CIs (apparent productivity of labor)
Marginal prod. index: Marginal productivity index for partial CIs (apparent productivity of labor)
Sources: Calculations based on the employment and value-added statistical series for partial industries, according to national accounts, 1999-2011

Non-dedicated support CIs record fairly low average productivity gains of 0.9 per cent per year (see Table 3.17). Given that their activities are doubtless the most different from CIs and the most similar to the general functioning of the economy, it is surprising that their profile does not mirror that of the economy. Two factors apparently account for this: the predictable decline in value added during the crisis, and above all the capacity of these CIs to retain their workforce, given that their highest employment levels have been recorded over the last four years. The sheer scale of transport and telecommunications activities probably accounts for this phenomenon.

Table 3.17. Trends in the apparent productivity of labor for non-dedicated support CIs

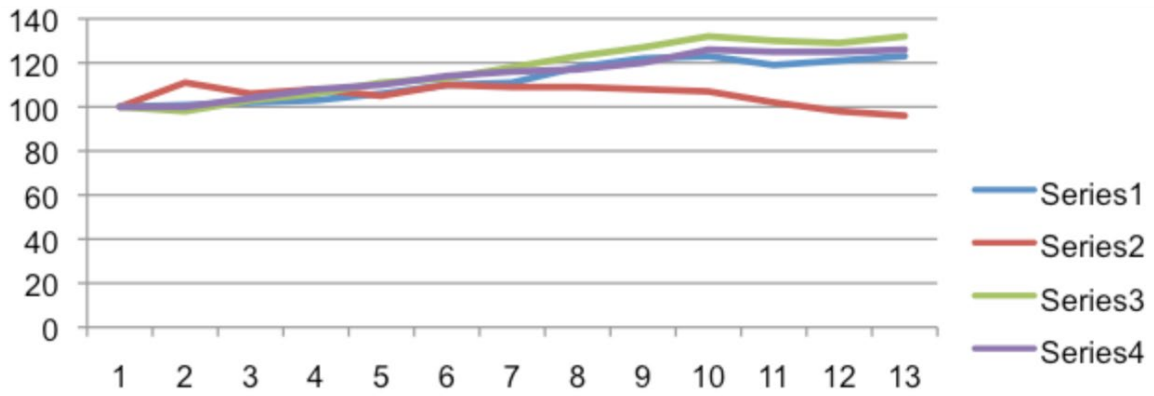
Year	VA	Jobs	VA/Jobs	Average prod. index	Marginal prod. index
1999	13.4	352	0.03806818	100	
2000	13.8	361	0.03822715	100	0.4
2001	14.8	372	0.03978495	104	4
2002	15.7	380	0.04131579	108	3.8
2003	16.3	388	0.04201031	110	1.6
2004	16.8	387	0.04341085	114	3.3
2005	17	385	0.04415584	116	1.7
2006	17.3	388	0.04458763	117	0.9
2007	18	394	0.04568528	120	2.4
2008	19	395	0.04810127	126	5.2
2009	18.8	393	0.04783715	125	0.5
2010	18.9	396	0.04772727	125	0.2
2011	19.2	400	0.048	126	0.5

VA: Value added of non-dedicated support CIs in billion euros
Jobs: Number of jobs for non-dedicated support CIs in thousands
VA/Jobs: Ratio of value added to employment for non-dedicated support CIs
Average prod. index: Average productivity index for non-dedicated support CIs (apparent productivity of labor)
Marginal prod. index: Marginal productivity index for non-dedicated support CIs (apparent productivity of labor)
Sources: Calculations based on the employment and value-added statistical series for partial industries, according to national accounts, 1999-2011

In summary, it can be said that the four **groups** present profiles that are significantly different to a certain extent:

- Core CIs closely reflect the traditional analysis of the cultural sector: value added partially evolves in tandem with the economic cycle, but employment rises steadily over the entire period and peaks at the end of the period.
- Partial CIs reflect a mix between the cultural profile and the standard economic profile: their value added is not significantly affected by the crisis (cultural profile), but they visibly save on jobs (average profile).
- Non-dedicated support CIs are characterized by growth and stable employment even during the crisis; such stability possibly stems from the French practice of supporting certain strategic sectors.
- Interdependent CIs appear to be atypical: when value added increases, employment rises significantly; when value added decreases, employment does not decline.

Chart 3.1. Trends in the apparent productivity of labor for CIs



Blue (series 1): Essential CIs
Green (series 3): Partial CIs
Red (series 2): Interdependent CIs
Violet (series 4): Complementary CIs
Sources: Tables 14, 15, 16 and 17

3.4 Exports

The exports of CIs can be compared directly with the total exports of the country. However, comparison with GDP is more difficult. The difficulty stems from the fact that national accounts make a global adjustment each year – termed "territorial adjustment" – which covers purchases of French products by nonresidents who are, by and large, tourists. However, this adjustment is not disaggregated for each branch, such that it is impossible to provide exact estimates, let alone percentages, for the various branches which correspond to the determined values of CIs.

The adjustment essentially covers the segment of the tourism industry relating to purchases of goods and services directly or indirectly subject to copyright. According to tourism experts, the percentage of tourists targeted by such activities varies between 20 per cent (cultural tourists or those who travel with strictly cultural motives) and 35 per cent (tourists who engage in cultural activities or purchase cultural products). These percentages were determined by Origet du Cluzeau in her book, *Le tourisme culturel* (Paris: PUF), and are used as the benchmark for all corresponding studies. Conservatively, this study has opted for the lower margin, which entails retaining one fifth of this adjustment for CIs. This conservative choice is because one of the major export items is IT equipment. However, it is not stated that tourists – even those considered to be cultural tourists – take home a lot of IT equipment, especially as such equipment is often exported to companies. As regards the relative analysis of CI categories, the adjustment is not taken into account because the problem at this point is determining how each category of CIs evolves within the entire group.

3.4.1 *CIs in total exports*

In 2011, the CI share in total exports was 11.4 per cent, as compared to 14.32 per cent in 1999 (see Table 3.19). The year 1999 is deemed to be quite exceptional as a starting point, given the extremely poor performance of total exports that year, which led to the loss of more than one percentage point as from 2000. However, this deduction carries little weight, since the CI share in total exports continues to decline, as is confirmed by the indices, which rose from a baseline of 100 in 1999 to 119 for CIs but surged to 150 for total exports. A possible explanation, therefore, is that the decline in CI share stems more from the buoyancy of French exports and not exclusively from any export difficulties encountered by CIs. These changes occurred at a time when the global share of exports shrank from approximately 25 per cent to 22 per cent over the same period, a trend which has become more pronounced since then.

Table 3.18. Share of CI exports in total exports and the corresponding indices

Year	Initial CI data	Global adjustment	Adjustment %	CI exports	Total exports	%	CI index	Ind. of total exports
1999	45.3	31.5	6.3	51.6	360.3	14.32%	100	100
2000	47.4	35.7	7.14	54.54	414.8	13.15%	106	115
2001	**48.1**	**36.1**	7.22	55.32	424.1	13.04%	107	118
2002	**46.0**	**36.9**	7.38	53.38	424.4	12.58%	103	118
2003	**43.7**	**34.9**	6.98	50.68	411.4	12.32%	98	114
2004	**46.1**	**36.4**	7.28	53.38	432.8	12.33%	103	120
2005	**48.8**	**35.4**	7.08	55.88	452.9	12.34%	108	126
2006	**51.0**	**36.9**	7.38	58.38	485.9	12.01%	113	135
2007	**50.8**	**39.6**	7.92	58.72	506.7	11.59%	114	141
2008	**53.2**	**38.5**	7.7	60.9	521.0	11.69%	118	145
2009	**45.1**	**35.5**	7.1	52.2	440.7	11.85%	101	122
2010	**49.1**	**35.4**	7.08	56.18	494.5	11.36%	109	137
2011	**53.5**	**39.2**	7.84	61.34	538.3	11.40%	119	150

Column 1: Year
Column 2: Value of CI exports
Column 3: Value of territorial adjustment
Column 4: Value of territorial adjustment ascribed to CIs
Column 5: Adjusted exports of CIs
Column 6: Total exports
Column 7: Percentage of CIs in total exports
Column 8: CI export index
Column 9: Index of total exports
Sources: National accounts and export adjustment coefficient tables. Indices: base 100 in 1999:

3.4.2 *Internal breakdown of exports*

Tables 3.20 and 3.21 make it possible to determine the respective shares and performance of the various CI categories. The detailed calculations for each category are provided in the annexes, in Tables 3.20.a (core CIs), 3.20.b (interdependent CIs), 3.20.c (partial CIs) and 3.20.d (non-dedicated support CIs); and for the trends by Tables 3.21.a (core CIs), 3.21.b (interdependent CIs), 3.21.c (partial CIs) and 3.21.d (non-dedicated support CIs).

3.4.2.1 *Core CIs*

The share of core CIs in total CI exports is much smaller than their contribution to value added and employment, since it currently stands at 16 per cent, as compared to 50 per cent in the past. Over the relevant period, this share rose from 15 per cent to 16 per cent, as evidenced by comparing the index of the core CIs with that of CIs (119 compared to 113). However, this is a secondary point, especially because the performance of core Cis was fairly erratic during this period.

Perhaps the cause of such relatively poor performance is that there are many activities relating to the provision of services and the production of cultural goods which are harder to export than others, either because they cannot be transported or because they possess local attributes which are more or less recognizable abroad. While there is some truth in these assumptions, it should not be forgotten that the businesses concerned may not be exploring foreign markets as much as they should, especially because, in certain cases, there is often an advantage to their being located within the country.

3.4.2.2 *Interdependent CIs*

The share of interdependent CIs is greater than that of core CIs because one item alone, namely the production of IT, electronic and optical equipment, generates close to half of the interdependent CI value. However, this

did not prevent the share of interdependent CIs from declining in absolute terms (from 19 billion to 16 billion euros) and in relative terms (from 40 per cent to 28 per cent) relative to total CI exports, with their index rising from 79 to 113. This trend is almost persistent throughout the period and the crisis period only fuels it. Paradoxically, the IT, electronic and optical products manufacturing branch, which accounts for almost 50 per cent of this value, has hardly lost any ground, thus aggravating the export decline of the other interdependent industries.

Table 3.19. Percentage distribution of CI exports between the various categories

Year	CI value	Essential CIs (%)	Interdependent CIs (%)	Partial CIs (%)	Non-dedicated support CIs (%)
2000	47.4	15%	40%	37%	8%
2001	48.1	15%	37%	40%	8%
2002	46.0	15%	35%	41%	9%
2003	43.7	16%	32%	43%	9%
2004	46.1	16%	33%	42%	10%
2005	48.8	16%	33%	42%	9%
2006	51.0	15%	33%	42%	9%
2007	50.8	15%	31%	44%	9%
2008	53.2	20%	28%	44%	9%
2009	45.1	16%	27%	48%	10%
2010	49.1	14%	29%	47%	10%
2011	53.5	16%	28%	47%	9%

Sources: National accounts and calculations based on coefficients

Table 3.20. Export growth indices for CIs and the various CI categories

Year	CI index	Core CIs index	Interdependent CIs index	Partial CIs index	Non-dedicated support CIs index
2001	100	100	100	100	100
2001	102	103	95	108	103
2002	97	101	84	108	105
2003	92	97	74	107	108
2004	97	106	79	110	116
2005	103	114	84	115	118
2006	108	111	89	123	121
2007	107	111	84	127	121
2008	112	149	79	132	121
2009	95	100	63	122	121
2010	104	101	74	132	124
2011	113	119	79	144	129

Sources: National accounts and calculations based on coefficients
Indices: base 100 in 2000

3.4.2.3 *Partial CIs*

Unlike other CIs, partial CIs increased their export share during this period. It actually surged from 37 per cent to 47 per cent, thus confirming the rise in the respective indices: 144 compared to 113. This leverage effect

from partial CIs accounts for the expansion of the CI share in total exports. Moreover, this increase is very steady and the percentage and index gains continue during this period.

Hence, it can be said that partial CIs play a special, trend-setting role for CI and are a such imbued with characteristics that make it impossible to conflate them with core CIs. While core CIs could be likened to the pool of cultural industries (in the traditional sense of the term), partial CIs are more similar to creative industries as they are currently understood.

3.4.2.4 *Non-dedicated support CIs*

The share of non-dedicated support CIs grew very slightly, inching up from 8 per cent at the beginning of the period to 9 per cent at its end. The indices seem to grow faster, albeit from a restrictive basis (144 compared to 113). Furthermore, this growth is consistent throughout the period and is unaffected by the crisis since this is the only category which does not record a decline and even continues to grow. The same characteristic already noted in the employment part of the study is also evident here: these CIs went through the crisis without suffering a decline, albeit for quite different reasons.

In summary, it can be said that there are two trends in this case, namely:

- an increase in CI exports that is not as significant as the increase in total exports, challenging assumptions that these CIs would reap nothing but gain from globalization; and
- a redistribution of the internal shares of each CI category, mainly to the benefit of partial CIs and to the detriment of interdependent CIs.

3.5 Profile of CIs

An analysis of the position of CIs within the economy, followed by that of its dynamic trends, provides a better idea of their originality, potential and limitations and could, where appropriate, serve as a basis for determining the possible direction of public copyright and economic policy.

When mention is made of copyright industries or creative industries (today, the two concepts, without being direct synonyms, tend to refer to the same thing, possibly because they have not been clearly defined), a certain number of expectations are expressed, namely that these industries should:

- function henceforth as engines of growth;
- play a countercyclical role;
- constitute a reservoir of jobs; and,
- according to some (rarer) observers, rekindle productivity within economies that have already reached maturity.

To address these concerns on the basis of the dynamic trends observed, it is worth bearing in mind first of all that these industries fall under two rather opposite systems, namely the traditional manufacturing industry system and the culture or creativity system.

- Being similar to manufacturing industries, these industries give the impression that their activities generate productivity gains and exports that will drive exogenous growth. They appear to have enormous development potential since their marginal cost decreases with the quantity produced. However, they will obviously be subject to market fluctuations and consequently to crises.
- Since their activities are similar to cultural and creative activities, CIs give the impression that the sector is vulnerable to significant demand uncertainty and therefore has very limited scope for substituting capital for labor. They promote economic development by generating references that can be shared and leveraged by all, hence serving as the drivers of endogenous rather than exogenous growth.

Productivity

One indisputable point is that CIs have low productivity gains. None of the four copyright categories achieve productivity gains comparable to or higher than the economic average. This is not a totally unexpected result: economists have always underscored the difficulty of substituting capital for the creative forms of labor that are predominant in varying degrees in the different categories under consideration. Studies, from those by Baumol and Bowen since 1966 to those by Cunningham and Pott in 2013, have underscored this productivity differential, although in France it has sometimes been used as an argument for placing this sector under government supervision.

Export and growth

Another less obvious but equally indisputable point is the relatively limited contribution of CIs to export and consequently, their limited advantage as drivers of growth through exports. This fact is surprising because copyrights are often presented as a mechanism for hedging against creativity risks while gradually capturing a large number of market niches worldwide.

What could account for such poor export performance, which can only yield a low contribution to growth? One possible explanation is that the core of these CIs (i.e., core CIs) is not fundamentally export-oriented. Furthermore, they record much lower values in export performance than in value added and employment. This could stem from uncertainty and the risks incurred (Richard Caves' assumption) or the above-mentioned lack of productivity gains (Baumol's assumption), or the very "local" nature of the products which are, for that reason, rarely recognized in external markets. As will be demonstrated in the next chapter when discussing fashion, only brands recognized internationally and generally associated with the luxury goods market are largely export-oriented. Another possible explanation is that the commercial and distribution networks for French products abroad are inefficient and few activities – unlike in the film and fashion industries – are actually organized. While certain products have a "French Cool" about them, there is no equivalent "Japanese Cool" or "British Cool" in France to capture often considerable markets. Lastly, the relative decline of the *Francophonie* undoubtedly plays a role in this context. A review of the France's cultural external trade balance shows that for the past several years, it has been sustained by the sale of classical works of art which offset imports of music, TV shows and books.

It should be noted, however, that CIs disseminate ideas, references and activities that will be used by other sectors to enhance their creativity and competitiveness. Hence, the key role that they fail to play in exogenous growth – considering their limited contribution to exports – is without doubt played in endogenous growth, although it is difficult to measure this directly.

A countercyclical profile?

A more complex point is the countercyclical role that some observers expect CIs to play. Economic cycles are reflected in statistics on value added, employment and exports, but are generally not as pronounced as in other industries. The situation remains unchanged during both peak and sluggish periods. Hence, although CIs experience milder fluctuations, they still reflect the general trends of the economy. That said, fluctuations in value added are more pronounced than fluctuations in employment.

Original labor demand function?

Generally, CIs (excluding interdependent CIs) experience a gentle rise in employment which levels off and even declines slightly during a crisis year. However, this trend is in sharp contrast to the downturn fluctuations in value added. Tthe various CI categories, starting with core CIs, appear to try as hard as possible – in any event, more than the other sectors of the economy, to retain their workforces, which are often highly skilled. The argument often advanced, namely that these are public sector jobs, generally fails because, while such public support may be presented as a specifically French policy for its artistic sectors (i.e. both the intermittent employment scheme and subsidies to cultural enterprises), it does not explain the vigorousness of this trend. The explanation may quite simply be that since CIs demand highly specific skills, they try to retain their workforce for as long as possible, even in times of economic difficulty, thereby avoiding the future cost of finding and selecting new workers to replace those who have been laid off. The labor demand function of

CI enterprises – especially core CIs – is more complex than the model perceived from a standard economic perspective.

Hence, CIs are indeed the product of a symbiosis between the cultural industries model and the traditional industrial model. However, this does not make them hybrids since their economic base is creativity, which only emerges slowly and often indirectly, unlike value added, employment and exports. In this case, the limitation of statistical studies, however necessary or relevant they may be, is that CIs are driven by a whole new creative economy which is autonomous and quite often at variance with the traditional mechanisms of market formation, valuation and business models. At this juncture, a dynamic analysis would make it possible to gauge their magnitude and determine their potential.

4. Current challenges of copyright industries

The general trends reviewed so far are merely averages which reflect the trajectories, gains and difficulties of CIs. This is why it is important to illustrate this general statistical approach with more specific analysis. Accordingly, this chapter will focus on three CIs which clearly reflect the situation in France, namely cinema, fashion and video games.

4.1 Cinema

In many regards, the cinema industry in France is considered emblematic. Apart from its long history and the longstanding recognition that it has earned worldwide, France generally releases the greatest number of films per country within the European Union (over 250 per year since 2010). Moreover, the cinema sector has benefited from public incentives and intervention. In many regards, it is also the symbol and embodiment of "cultural exception" as defined by France. Lastly, while the fiction film remains the unchallenged reference genre in this domain, the cinema industry has made forays into a number of parallel markets, of which TV serials are probably the most significant.

4.1.1 *Production and export*

France produces 200 to 280 feature films per year. This figure covers approved films and those likely to benefit from the wide variety of public funding mechanisms. Hence, the films in question may not necessarily be of French origin. In 2012, for instance, only 209 films were fully or predominantly French. However, there has been exceptional growth in this number, to the point where it is comparable to the number of films released in the United States. This growth has beein aided by a steady increase in targeted funding and financial assistance from the state.[7]

Table 4.1. Films produced per genre

	2008	2009	2010	2011	2012
Fiction films	195	195	225	225	225
Documentaries	35	30	27	37	42
Animated cartoons	10	5	9	10	12
Total	**240**	**230**	**261**	**272**	**279**

Source: CNC, 2013

French cinema exports consist of foreign sales of French films rights, or of films approved by the National Center of Cinematography (CNC); in other words, French-devised films (films produced with predominantly French funding) and films co-produced with minority French funding (provided there is a co-production agreement with the country of origin or the co-producers). Meanwhile, the sale of export rights means the sale of "all rights" to distributors – i.e., all broadcast channels (cinema theaters, television, video, video on demand, catch-up television) – and sale of limited rights for a category of broadcast media.

In 2012, the export earnings of French film-exporting companies hit a record high of 301 million euros, broken down into 211 million euros for French films (+22 per cent compared to 2010, the year of the previous record) and 90 million euros for exported foreign films. This robust performance was generated by a few titles (in particular, *Taken 2*, *Intouchables* and *The Artist*). Nonetheless, exporters declare that despite the surge in turnover, sales prices remain lower than pre-crisis levels (2008). Consequently, the increase in the number of sales (and, consequently, contracts) for an equivalent turnover makes working conditions more complex for professionals. Among the French films exported in 2012, "recent" films accounted for 186 million euros, or 88 per cent. Trends over the decade show that the share of export earnings generated by recent films is expanding, while the share of catalog films is declining. Some 82 per cent of the earnings come from the sale

[7] With regard to trends, while French production has remained stable over the last ten years, the output of its European partners has increased: +65% For Germany, +41% for Italy, +65% for Spain and +13% for the UK.

of combined rights (cinema halls, television, video, catch-up television). The sale of television broadcast rights represents only 11 per cent of earnings, although the percentage is much higher for catalog films (produced before 2009), which are mainly exported for television broadcasting (43 per cent). For the moment, earnings strictly from the sale of video-on-demand rights remain very limited.

In 2012, French film earnings increased in all the major geographical areas. Western Europe continues to be the main market for French cinema (43 per cent of total earnings) followed by North America (29 per cent of earnings). The distribution among the geographical areas remains relatively stable, although there is a steady progression in the North American share (19 per cent in 2007 and 29 per cent in 2012). Exports remain concentrated in a limited number of countries: the first 15 countries generate 80 per cent of earnings, with the first 5 accounting for over 50 per cent. The United States is the leading consumer of French films (earnings of 38 million euros, or a market share of 18 per cent), followed by Germany and the German-speaking territories with earnings of 35 million euros and a 16 per cent market share. The other major markets are Canada, Russia, Italy, Switzerland, the United Kingdom and Ireland, Spain, Japan, the Scandinavian countries, Belgium, the Benelux countries, Australia, Latin America and Poland.

4.1.2 *French cinema value chain*

Like any cultural industry, the cinema value chain is organized around three major clusters, namely: production, distribution and consumption.

Film production

France produces 200 to 280 feature films per year. This figure covers approved films or those likely to benefit from the wide variety of public funding mechanisms. Hence, the films in question may not necessarily be of French origin. In 2012, for instance, only 209 films were fully or predominantly French, and this reflects steady growth. Furthermore, almost one third of these films were first-timers, representing a fairly high renewal rate.

Some 191 companies participated in the production of these 209 French-devised films. This means that, on average, a large number of companies produce only one film per year, while a limited number produces several. For instance, Pathé Production, Gaumont and Les Films Pelléas, presented five French-devised films in 2012. In fact, some of these companies also produce films with minority French participation and even prefer to concentrate on their distributor role. The spread is even wider if post-production is included – meaning that all TV productions are reckoned together with feature films. Nearly 3,800 companies are registered in this sector and they employ nearly 12,000 persons, generating value added worth 986 million euros.

The average cost of a film in France is 5.1 million euros. However, the budget spread is quite wide, since the majority does not exceed 2 million while several attain 20 million. Consequently, the median cost is lower than the average cost. This sparked off a huge debate in France in 2013, with some film industry representatives arguing that such huge budgets reflected the large salaries paid to certain famous actors and not the quality of the final product. Another consequence of the cost increase today is that films costing over 10 million euros and those costing less than 1 million euros are more frequent than the intermediate categories, which are becoming increasingly rare.

Table 4.2. Film budget estimates in France

	2003	2005	2006	2007	2008	2009	2010	2011	2012
Average estimate	4.63	4.99	5.27	5.43	6.42	5.10	5.48	5.45	5.10
Mean estimate	2.60	2.80	2.82	3.08	3.40	3.06	3.99	3.73	3.72

Source: CNC, 2013

Wages and social security contributions account for almost 50 per cent of production costs, while technical production costs account for only one third. This is quite different from the cost structure of American films, which have relatively higher technical production costs.

Table 4.3. Percentage distribution of production costs per item in 2012

Artistic fees	9.5%
Staff	20.0%
Producers	5.5%
Cast	10.9%
Social benefits	12.5%
Technical equipment	8.5%
Film – laboratories	3.7%
Sets and wardrobe	7.1%
Transport, out-of-pocket expenses, insurance, miscellaneous	10.1%
Technical remuneration	6.1%
Filming	5.9%

Source: CNC, 2013

As to funding, the total investment for 2012 was 1.3 billion euros, of which 76.4 per cent came from French investors. Television channels are still the main source of funding in France, with 340.57 million euros, or almost one third of funding, if co-production agreements and pre-purchases (their two main support mechanisms) are taken into account.

The other funding sources include the following: producers (28.9 per cent), SOFICA[8] (4 per cent), automatic support (2.7 per cent), selective support (2.3 per cent), regional assistance (1.5 per cent), video distributors and publishers (1.7 per cent and 0.8 per cent), as well as various agreements in France and abroad (distributors and advance payments on sales (10.8 per cent and 9.3 per cent respectively)). In summary, 80 per cent of the funding comes from producers, television channels and various agreements. The government's contribution of barely 10 per cent has a strong potential leveraging effect, especially in pool funding, but is inconsequential in absolute terms.

Hence, in 2012, as in previous years, television channels were the main funders of French-devised films with a contribution (co-production and pre-purchases) of 32 per cent, or 340.57 million euros. Canal+ alone, long termed the cinema channel because its initial mission was to contribute to cinema funding, invested 186.43 million euros in 130 of the approved films in 2012, representing 15 per cent of total investments. Public television channels have fairly high demand, characterized above all by the magnitude of their average budgets for co-produced films. The same situation applies to non-paying private channels.

Film distribution

In 2012, 6237 films were screened in French cinema theaters, of which 40.3 per cent were French films. In Europe, this figure is usually compared to the share of American films screened, which is 42.7 per cent. The huge imbalance of 10 years ago (34.9 per cent of French films compared to 52.2 per cent of American films) has therefore been corrected. However, this sudden rally in French film figures occurred only in the past few years, driven mainly by a few box-office hits (such as *Bienvenue chez les Chti* and *Intouchables*). These percentages are comparable for exclusive first releases, but are significantly higher for arthouse films (70.2 per cent). In contrast, they fall sharply for 3D films. While half of the films released in 2012 were distributed through a network of 10 to 200 theaters, American films regained a relatively significant market share. One quarter of these films had more restricted distribution, while another quarter was more widely distributed.

Some 524 companies, including 133 "pure distributors", participated in the release of the 615 films distributed annually. Fourteen distribution companies, or 9 per cent, provided 31.4 per cent of the total supply of first-run films and 62.3 per cent of opening-week copies. These were 20th Century Fox, Diaphana Distribution, EuropaCorp, Metropolitan Film Export, Pathé Distribution, Pyramid, Rezo Films, SND, StudioCanal, UGC

[8] Television and Audiovisual Financing Companies.

Distribution, Universal Pictures France, Walt Disney Pictures France, Warner Bros France and Wild Bunch. The top 10 distributors thus earned 73.2 per cent of the total receipts in 2012, while the top five earned 45.8 per cent. Hence, this segment of the cinema value chain is relatively more concentrated than the production segment, reflecting international trends. Its total turnover is 1,785 million euros, representing a value added of 374 million euros, and it employs nearly 2,000 people.

The average distribution cost of a French initiative film is 0.673 million euros, a figure which should be compared with the average production cost (5.10 million euros). The main components of this cost are: laboratory costs (30.27 per cent); advertising space (50.24 per cent); creation of advertising material (11.04 per cent); and miscellaneous costs (17.73 per cent).

Exhibition

Screening in cinema theaters is only one the many forms of exhibition. However, the network of cinemas is so extensive that screening remains a major form of exhibition in France. French cinemas welcomed 203 million moviegoers in 2012, down from the (unusually high) attendance of 2011.

Box-office receipts were 1.3 billion euros in 2012. While admissions grew by 17 per cent during the decade under study, box office receipts spiraled by 31 per cent, average earnings per entry having increased from 5.74 euros in 2003 to 6.42 euros in 2012. This growth stems from the VAT increase from 5.5 per cent to 7 per cent as of January 1, 2012, the (albeit fairly limited) development of 3D cinema and the increased comfort of cinema theaters. Hence, tickets costing over 10 euros accounted for 17.10 million admissions in 2012, compared to 13.75 million in 2011.

The breakdown of these average earnings is as follows: 10.72 per cent for the non-dedicated support special tax (TSA) which finances the CNC's Support Fund; 6.59 per cent for VAT; 1.515 per cent for copyright royalties deducted by SACEM; 37.48 per cent for distribution; and 43.96 per cent as operating expenses.

Unlike in several European countries, the number of cinema theaters remained relatively stable over a ten-year period (2,029 in 2012 compared to 2,130 in 2003). This is also true for the number of screens (5,500 in 2012 compared to 5,200 in 2003). Some 81 per cent of all theaters had at least one digital projector, compared to 47.6 per cent in 2011, showing the successful digitization of cinema theaters. Quite unexpectedly, there is high concentration in this sector as well. Of the 863 companies registered as operators, the top 10 earners in terms of box office receipts operated 2134 screens in 2012, or 38.8 per cent of the total, and received 61.4 per cent of admissions. In fact, large theaters are increasingly gaining ground, considering the number of establishments (13.4 per cent), screens (42.7 per cent), seats (44.8 per cent) and admissions (66.2 per cent).

This concentration of theaters matches that of films. The top-grossing films maintained a significant and stable share of admissions over the past 10 years: the first 10 top-grossing films attracted one quarter of moviegoers, while the first 20 top-grossing films attracted 40 to 45 per cent of admissions.

In 2012, the total turnover for theater releases was 11,384 billion euros, representing a value added of 439 million euros, with these companies employing nearly 8,540 people.

Sale of television rights

Films were also released through television programming. In 2012, the purchase price of films varied from 0.05 million to 4.5 million euros depending on the channel as follows: 0.5 million to 3.6 million euros for TF1 and M6, both private commercial channels; 0.07 million to 4.5 million euros for movie channels such as Canal + or OCS; and 0.15 million to 1.6 million euros for public broadcasters.

While film projection accounted for 4.2 per cent of the program content on free-to-air (FTA) national channels, it however represented 5.3 per cent of viewing time for televiewers aged 4 and above (source: Médiamétrie-Médiamat). This certainly explains the significant increase in the number of films broadcast on television from 2003 to 2012 and the development of digital terrestrial television (DTT) channels.

4.1.3 *Government support to cinema in France*

The main support for French cinema comes from the CNC and is supplemented by numerous fiscal mechanisms.

CNC support

The CNC collects tax resources allocated to cinema in two ways, namely:

- automatic support, which is actually open-ended drawing rights available to producers, distributors and operators based on criteria determined by the box-office performance of their previous films (e.g., box office receipts for previous films) or projections of their future works. This system ensures that earnings are reinvested in future productions with a view to consolidating the cinema industry as a whole; and
- selective aid or support, which covers subsidies granted by a board of professionals based on the criteria of diversity and "talent renewal". It is the vector of an active policy of creation and redistribution.

Table 4.4. CNC support to cinema (in EUR million)

	2009	2010	2011	2012	2013
Automatic support	158	159	155	166	161
Electricity	74	72	67	73.2	72.6
Distribution	25	23.7	22.9	24.9	24
Operational phase	59	63.9	65.9	68	65.4
Selective support	115	130	139	154	161
Electricity	43.8	44.2	48.3	49.7	50.7
Distribution	7.1	7.8	8.3	8.8	9
Operational phase	57.5	71.4	66.0	68.6	72.8
Broadcasting	7.1	7.5	16.6	27.7	28.9
Total	**273**	**290**	**295**	**320**	**323**

Source: 2012 CNC Annual Report. These figures correspond to aid actually disbursed in 2012.

Creation and production financing support amounted to 80 million euros. Such support accounted for 5.5 per cent of the funding for French-devised films in 2012 and is, in general, inversely proportional to the film budget. It covers scriptwriting, feature film development, automatic support for film producers, advance on receipts, support for directors and producers and support for national and international co-productions. The most noteworthy support mechanism amongst all the above is the advance on receipts. In 2012, 51 feature films received an advance on receipts prior to production, including 50 French-devised films: 17 were first films and 10 were second films. The total of advances for approved films in 2012 was 21.24 million euros, representing 416,000 euros on average per film and covering 15.8 per cent of the film budget estimates. Lastly, five support mechanisms have been instituted by the CNC specifically for short films, amounting to a total of 7.2 million euros.

Distribution financing support covers both automatic and selective support mechanisms, namely: support for new releases, support for old films and support for films produced for young audiences. Exhibition support also comprises two mechanisms and often supplements local support. It covers support for the construction and modernization of movie theaters, support for arthouse cinemas, support for programming and animation and support for digitization.

All these support mechanisms are supplemented by export aid. Awarded by a specific commission of the CNC, export aid helps with the promotion of a given film (brochures, publicity in the media, press attachés), or with subtitling or dubbing in English to boost international sales. Such subtitling and dubbing assistance was provided for 88 films in 2012. There is also a fund to finance expenditure incurred by film exporters, provided in partnership with the Institute for the Financing of Cinema and Cultural Industries (IFCIC). Lastly, there is an Advance Fund for Exporting Movies (FARAP), with an endowment of 8 million euros, to finance

the minimum requirements and the international promotion and distribution costs of film exporters, through an advance fund mechanism (4 per cent interest rate). Exporting companies may request a loan of up to 0.6 million euros for a maximum period of 36 months.

Tax incentives

Film financing companies (SOFICA) are companies whose investors may deduct the amount of their investment in the film company from their tax base. This is therefore a longstanding mechanism which significantly mitigates the risk long associated with film making, thereby eliminating the penalty of exposure to above-average risk. It is an important and traditional mechanism that finances almost 10 per cent of films produced. In 2012, SOFICA contributed financing of 118 approved films, its highest number in a decade. Its total investments amounted to 44.7 million euros, which is its second highest investment in a decade (50 million euros in 2010). Average investments stood at 378,400 euros and covered an average of 7.1 per cent of the budget of the films concerned.

The film production tax credit exempts executive producers from paying taxes on expenses incurred in France while making films that are entitled to automatic support for the production of feature films. To be eligible, the original versions of the films must be wholly or principally in the French language, they must be shot primarily on French territory and must contribute to the development of French and European film-making. The tax credit is equivalent to 20 per cent of the total amount of eligible expenditure, up to a maximum of 80 per cent of the production budget, which is capped at one million euros. Eligible expenses include the remuneration and social security contributions of authors, performers, technicians and production workers, as well as expenditures related to filming, post-production, film stock and other image media and laboratory needs. The service providers must be based in France and personally provide these services on French territory. In 2012, 121 of the 209 approved French initiative films received provisional approval for the tax credit. The cumulative total estimate is 734 million euros, of which 671 million euros (91 per cent) is fully spent in France. The total eligible expenditure for these 121 films is estimated at 308 million euros and would generate an aggregate film production tax credit of approximately 55.5 million euros. According to the finance law, the estimated tax credit cost for 2014 was 70 million euros.

The *international tax credit* (or tax rebate on executive production expenses of cinematographic and audiovisual works in the General Tax Code) encourages international co-productions filmed or produced in France. Foreign-devised films wholly or partially produced in France may therefore be eligible for this mechanism. It is granted selectively by the CNC to a company that carries out the executive production of its film in France, based on a scale of points validating the film's linkage to French culture, heritage and territory. It represents 20 per cent of film expenditures in France and is capped at 4 million euros. Over the last four years, this international tax credit has benefited 62 cinematographic and audiovisual works of 13 different nationalities. It amounted to 12 million euros in 2014.[9]

Public support from local authorities

In addition to state support, the cinema industry also received support from local authorities, amounting to 16.2 million euros in 2012, or one third less than the amount for 2008. Almost of all of this support takes the form of assistance from the regions (97 per cent) to support films shot within the regional territory. The ÎledeFrance region provided almost half of all the support (8.4 million euros) by contributing to 35 films. RhôneAlpes Cinéma contributes to financing by providing co-production support.

4.1.4 *Debate on French cinema*

The French cinema industry is remarkable: it is often cited not only as one of the major copyright industries, but also as proof that public support is indispensable to its sustainability. Actually, the role played by these mechanisms is not as big as might be imagines, because they only have a leverage effect, especially regarding contributions to television. Although the film industry has long benefited from cultural exception in the form of production aid and broadcast quotas, these mechanisms have been widely relaxed with the establishment of the EU single market.

[9] Tax Expenditure 320140, Volume II: Ways and Means, annexed to the 2014 finance bill.

In 2013, there was a huge debate on the sustainability and effectiveness of such mechanisms. What triggered this debate was an article published in *Le Monde* that challenged the possibility of sustaining the film industry given the spike in certain production costs.[10] According to Vincent Maraval, French actors were "money guzzlers" who sucked off all the profits of French cinema, a phenomenon fueled essentially by the growing role played by television channels in funding the cinema industry.[11] Describing the year 2012 as a "disaster", Maraval declared that none of the box-office hits for that year (*Les Seigneurs*, *Astérix*, *Pamela Rose*, *Star 80*, *Le Marsupilamerde*, etc.) had been profitable to their financiers, given the exorbitant fees paid to the more "bankable" French stars. One iconic example is that of Dany Boon, who received several million dollars for films whose receipts were not high enough to finance such a salary. Maraval gave the example of several other French actors who were paid exorbitant salaries in France but accepted fees 10 times lower to work in Hollywood. According to Maraval, this phenomenon is created by the obligation imposed on French television channels to fund film-making. By funding one third of French cinema, free-to-air (FTA) and pay TV channels have become the leading sponsors, far ahead of producers, authorization agreements (theater distribution, video release, exploitation abroad: 19.6 per cent), SOFICA (3 per cent) and all public support mechanisms. Moreover, the financial weight of television varies in tandem with film budgets, hence the need to secure the most bankable stars on the local market ... at any price. *"The much-vaunted French cinema support system benefits only a minority of upstarts (…). The solution is simple: cap salaries for films eligible to mandatory TV channel investments at 400 000 Euros per actor – and perhaps – a little more for the film director, plus a mandatory bonus determined by the film's box office performance".* Actually, Maraval should not have stopped there because another structural shortcoming of French cinema is the recruitment of intermittent workers, which offsets these additional costs since they are so underpaid. However, this practice comes at a cost in terms of fund transfers from the general social security scheme for technicians and artists who perform in live and recorded shows. In this wide-ranging debate, some have gone even further to argue that it is the multiplicity of these mechanisms that has led to the production of over 200 films per year, whereas only about a hundred are actually distributed and exhibited. For instance, the producer Pascale Ferran talks of a bunch of *"useless films, works of fiction better suited for television, which have clogged up the machinery and taken up cinema screens"*.

What is clear from all this is that cultural exception – meaning the strength of support mechanisms for national film production – gives rise to exceptionally costly films which must subsequently rely on a host of more or less proven artifices to survive. Olivier Babeau adds that: *"The French cinema support system is founded on what we deem to be an increasingly questionable assumption, namely that since cinema is a "cultural" product, it is not, by nature, capable of generating profit in most cases. Hence, it needs public funding.* ... [However, in this digital age], ... *Cinema theaters will contribute increasingly less to the receipts, compared to the multiple forms of video-on-demand consumption. The scope of film exploitation will become virtually unlimited, thus opening up more diversified opportunities to broadcast and enhance the profitability of cinematographic works".*[12] Hence, there is need to move towards greater flexibility and to stop equating quality with nonsustainability, especially where there is no quality in the first place.

4.2 Fashion, luxury and the garment industry

4.2.1 *The scope of the "fashion, luxury and the garment industry"*

The fashion industry in France covers textiles for clothing, clothing items and the corresponding distribution systems. The clothing (and footwear) industry accounts for 3.2 per cent of household consumption in value, roughly the same as the total expenditure on electronic and computer products and communication services. Although this share is in slight decline, it remains significant nonetheless and, indeed, contradicts the false assumption that production in this sector has somehow been abandoned to developing countries – an argument belied by the current vitality of the sector. However, from a broader perspective, the scope of fashion obviously extends far beyond clothing and footwear to include leather goods, jewelry and watches and even perfumes and cosmetics.

Within this set up, *haute couture* serves as the laboratory and driving force of the industry, setting the trend for the ready-to-wear clothing market and extending its influence throughout the entire luxury industry, for

[10] Maraval, V. (2012). *"Les acteurs français sont-ils trop payés?"* [Are French actors overpaid?], Le Monde, December 28, 2012.
[11] http://www.dailymars.net/cinema-francais-la-bombe-de-vincent-maraval-mode-demploi/.
[12] Babeau, O. (2013). "Marcel Proust did not need subsidies", L'Opinion, May 13, 2013.

which it continues to serve as an emblem. It also explains why this industry is particularly creative: luxury brands have to keep innovating to protect their brand image and consequently their market share. In this case, sustainability is the result of product renewal. The luxury or premium generally ascribed to *haute couture* only serves to generate a huge consumer goods market and even low-cost outlets, making it pointless to propose mid-range items which are deemed to be too plain to justify the purchase or too costly to justify the expense.

4.2.2 *The French fashion value chain*

The various fashion stakeholders in France can be classified according to their positions within the value chain.

- Fashion designers, who fall within the category of ordering customers and manufacturers, design the models.
- The models of the ordering customers and manufacturers are then sent to the garment factories operating under subcontractors and craft enterprises. There is a wide variety of subcontractors, ranging from the "industrial" to the more artisanal businesses which are used when there is a limited number of models to be produced or when the manufacture of items requires great care.
- The industrial manufacturers, craft enterprises and subcontractors are responsible for the production of the fashion items ordered by the ordering customers and manufacturers. Since orders are only paid upon delivery, after an advance payment by the ordering customer, these businesses bear a large part of the economic risk and consequently tend to relocate in order to save on costs to the extent possible. However, the main ordering customers among the luxury goods companies retain networks of craft enterprises specialized in the manufacture of top-of-the-range items and tend to maintain control of their brands by directly producing and distributing their own models, in order to control their brand quality and image from the factory right up to the market. Craft enterprises were very much affected by the 2007/2008 crisis, with a sharp contraction of their turnover and workforce (respectively 7.7 per cent and 7.3 per cent of average annual growth rate) over the period. It would appear that since 2010, the ongoing adjustment (takeovers of workshops, creation of minigroups) is making for improvements within the sector.
- Distributors, be they specialized or general, market fashion articles. These fashion stakeholders therefore constitute a fragmented group, each using its own methods. In 2012, specialized chains were the largest segment of the distribution market, representing, for instance, 33 per cent of the women's ready-to-wear market. The consequences are that the number of multi-brand stores has fallen (with Colette and Éclaireur featuring among the last representatives as regards designer brands) and designers who do not have a marketing network have difficulties distributing their products. Besides, non-luxury and low-cost distributors are big players, with an average workforce of 547 employees and an average turnover of 154 million euros. Their overall export rate is relatively low (12.6 per cent), which contrasts with French distribution networks that have 45 per cent of their stores located abroad. Low-cost fashion distributors (Décathlon, Promod, La Redoute, Camaïeu International, Okaïdi, NAF NAF, etc.) are essentially clothing and footwear supermarkets situated in the suburbs of major cities. They are limited in number but are, indeed, large businesses (average workforce of 1187 employees and average turnover of 247.2 million euros), which are not much geared toward the international market (export rate of 4.2 per cent on average). Consequently, the French system is very different from the American system, where the market is marked by a standardization of clothing norms and mores and accounts for the comparative advantages of American fashion (sportswear, casuals, unisex).
- In this context, *haute couture companies* combine craft with design, while often involving large financial groups in their value chains (from production to marketing), catering to an international clientele that operates at the pinnacle of the luxury goods market. *"Haute couture"* is a legally protected appellation that can be used only by companies featuring on a list prepared each year by a commission in the Ministry of Industry and published by ministerial decree.
- For their part, young designers enter the high-end ready-to-wear fashion segment and sometimes manage to present a *haute couture* collection to enhance their visibility without, however, mastering the process of manufacture and distribution. Given the very limited number of clients and the need for significant

investments to design and manufacture garments for fashion parades, young brands rarely stay within the *haute couture* segment for long. That is why there has been diversification towards the *tailored and designer ready-to-wear* sector, which is a more profitable. There is ongoing "cross-fertilization" between the "established" companies and young designers, which the federation strives to support by various means.

There is no general assessment of the fashion industry value chain in France, other than a survey by the French Institute of Fashion. According to this survey of the 1,559 fashion companies, this sector generated a turnover of 43 billion euros in 2011, with distribution accounting for nearly half of the economic weight of the sector (20.4 billion euros), followed by garment industry manufacturers and ordering customers from the luxury sector (10.7 billion euros) or the non-luxury sector (8.8 billion euros). The bulk of value added is still generated by luxury market stakeholders (3.5 billion euros) and distributors (3.8 billion euros), mainly because some fashion industry distributors manufacture and market their own brands, and are thus able to preserve their value added.

More precisely:

- Designers (garment industry manufacturers and ordering customers) generally generate a relatively high average turnover (11.4 million euros), but a rather moderate value added on turnover (23 per cent).
- Producers or craft enterprises have smaller structures (average turnover of 3.6 million euros), but a large value added on turnover (46 per cent), which reflects their knowhow.
- Distributors, which are fewer but larger in size (170.3 million euros of average turnover), have the lowest value added on turnover within the value chain (19 per cent).

All garment industry manufacturers and customers are widely internationalized in their sales, with at least a quarter of their turnover earned abroad. This percentage is higher for customers, with a turnover exceeding 500 million euros, up to 63 per cent of which is earned abroad. These mega-companies account for 40 per cent of the total export turnover. Luxury market stakeholders are more highly internationalized, generating nearly two thirds of export turnover.

Other segments of the value chain have a limited international presence: craft enterprises work for French customers and the major French distributors are mainly present in France, but the accounting methods adopted do not take into account the international turnover generated by foreign affiliates of French distribution groups. According to a study by the French Fashion Institute, the fashion industry generates an international turnover totalling 12.1 billion euros, representing 28 per cent of the total turnover.

Analysis of the export performance of France, Italy and Germany using a selection of clothing items also reveals three different models:

- Italy focuses on the high-end and luxury markets and charges the highest prices;
- Germany opts for the *mass market*, mainly by re-exporting imported products and charging low prices in order to export the largest quantities possible; and
- France is in an intermediate situation, exporting both luxury and *mass-market* products through its distributors.

Lastly, note should be taken of the important role played by the fashion federation and its three constituent professional associations. Each season they prepare a calendar of spring/summer and autumn/winter *haute couture* and ready-to-wear fashion collections for women and men. Each year, in January and July, Paris hosts about 30 *haute couture* fashion parades and about 40 parades for men's wear and, in March and October, 150 parades for women's ready-to-wear clothes. These promote the development of emerging brands by increasing their visibility, contribute to the promotion of brand and intellectual property rights protection and contribute to developing training for designers. The federation has a membership of 2,013,110 fashion and ready-to-wear clothes companies, including 34 with headquarters abroad.

4.2.3 *From fashion to luxury*

According to Barrere and Santagatta, the luxury goods industry is a *"financial and economic system comprising productive activities that are mainly devoted to the design of creative goods characterized by a high level of design, aesthetic research and intellectual value"*. As such, the luxury goods industry is only a subsector of the fashion industry.[13]

This sector is composed of both large companies and medium-sized (confirmed designers) or small (young designers, bespoke tailors) players. Thus, almost half of the luxury goods companies (56 out of 119) have a turnover of less than 5 million euros. These companies are highly internationalized (export rate of over 60 per cent) and their growth is driven by the highly robust growth of their export turnover (11.9 per cent on average annually over the 2007-2011 period). They account for more than half of French fashion exports (54.5 per cent). The stakeholders in the luxury goods industry are therefore a distinct category because, according to the survey of the French Fashion Institute, its members vertically and horizontally integrate all segments of the value chain. They are limited in number, with a huge average turnover (90.2 million euros) and a high value-added ratio.

The best example is obviously Hermès. As of end-2012, Hermès had a workforce of 10,118 employees worldwide and 323 exclusive shops, including 205 under direct control.[14] The house has acquired the status of an international corporate entity while remaining a human-sized company that still sticks to its artisanal know-how. It deploys its creativity through a wide variety of trades: leathercraft; leatherwork and upholstery; footwear; seat belts; gloves; ready-to-wear womenswear and menswear; hats; silks and textiles; furniture fabrics; jewelry, watches and perfumes; furnishings; wallpaper; and table art and furniture.

4.2.4 *A sector to expand and enhance*

It would be wrong today to consider the fashion industry to be limited to persons or, as some would say, the equipment of persons. It extends to equipment of the home and the home environment, such that the rituals of fashion, which have long focused on the clothing business, now encompass these new fields of activity. Hence, there are now new collections of household equipment, just as there are new collections in the garment industry. Fashion has become a major economic activity with a turnover of more than 152 billion euros and a workforce of nearly 550,000 employees. As regards pure production (i.e. excluding marketing activities), the fashion industry accounts for nearly 6 per cent of French manufacturing output and exports nearly 30 per cent of its products, earning close to 16 billion euros. It can be said that France contributes largely to Europe's ranking as the world's second largest exporter of textiles and clothing, after China but far ahead of the United States and Japan.

The years of extreme de-industrialization of the textiles and clothing sector (1980-1992) were followed by a revamp focused on products with higher value added. This revival of production is all the more relevant because it is currently accompanied by a greater decentralization of production sites throughout the country. It has even given rise to a fairly new trend: far from transforming artisans into laborers, clothing and luxury goods companies now seek to maintain their artisanal aspect, which they now perceive to be major sources of ingenuity and innovation. This (albeit limited) revival of national production has not sprung from economic nationalism, since the fashion sector in France has always been open to foreign artists or craftsmen, a key example being Charles Frederick Worth, who invented *haute couture* in Paris under the Second Empire. In fact, these developments reflect the comment made in 1886 by Marius Vachon in his 1886 book, *La crise industrielle et artistique en France et en Europe* [The industrial crisis in France and Europe], that we must *"put art into everything we do and let our imagination soar so as to become both an artistic and a commercial people"*. Hence, a relevant point in the current debate on creative industries is that fashion is not just a sector but an established system.

Many economists admit, even more so today than in the days of Veblen, that consumption refers as much to signs as to functional usage and that the functional or utilitarian value of a product is accompanied by a semiotic value, such that the traditional distinction between inferior and superior goods has been blurred, since both have this semiotic value. The fashion industry incorporates such dimensions by shortening product

[13] Barrere, C. and Santagatta, W. (2003). *Une économie de la créativité et du patrimoine : la mode.* Executive summary of the report prepared for the Department of Studies and Forecasts of the Ministry of Culture and Communication, February 2003.
[14] *Hermès Annual Report*, 2013.

life cycles, incorporating artistic creativity as a recurrent input, enhancing its brand image and factoring in the individual specificities of consumers to the greatest extent possible.

At any rate, the sector is currently attracting more attention from the government, which considers it an important means of boosting employment and external trade. Accordingly, the ministry responsible for reviving productivity signed a sector contract with the professional committee of the fashion and luxury goods industry on April 9, 2013, focused on the following four areas:

- developing industrial machinery to strengthen weak links in the industrial sector of the textiles, fashion and luxury goods industry;
- enhancing the attractiveness of the sector to young people and their families through a new vocational training mechanism;
- providing an incentive to encourage a more forward-looking approach among sector stakeholders by developing a sample funding application file to be disseminated to all stakeholders; and
- promoting the "Made in France" label by developing collections manufactured in France and by providing further training for vendors to promote the "Made in France" label among French and foreign customers.

Table 4.5. Timeline of companies founded in Paris

Before 1945	1945-1970	1970-2000	Since 2000
Hermès	Balmain	Kenzo	Lutz
Vuitton	Céline	Paule Ka	Alexis Mabille
Lanvin	Carven	Thierry Mugler	John Ribbe
Chanel	Dior	Agnès B	Felipe Oliveira
Rochas	Givenchy	Gaultier	Galante
Nina Ricci	Pierre Cardin	Castelbajac	Van Aasche
Balenciaga	Laroche	Galliano	Damir Doma
	SaintLaurent	Barabara Rui	Vacarello
	Cacharel	Lagerfeld	Yurkievich
	Smalto	Sorbier	
	Paco Rabane	Façonnable	
	Sonia Rykiel	Rick Owens	

4.2.5 *Public support*

Three major public support mechanisms are available.

The first entails *supporting the umbrella structures of the companies themselves*, such as professional development centers: DEFI for the garment industry, Comité Francéclat for jewelry and watches and the Centre technique du cuir [Technical Center for Leatherworks] (CTC) for footwear and leather products. These professional bodies are financed through earmarked taxes imposed on companies in the sector, which generate a total annual yield of 26 million euros. Their duties are to:

- promote programs to foster innovation and renovation in industrial and commercial concerns;
- help to improve staff training, production, management and marketing conditions in the garment industry;
- promote and advertise the products of the industry and enterprises in France and abroad;

- contribute to the creation of an enabling environment for design in the fashion industry and assist in preserving its heritage; and
- ensure coherence in the actions of collective interest organizations benefiting from these grants.

The second type of support comes from two tax credits, as follows:

- *Collection tax credit*: Expenditure on the development of new collections by industrial companies in the textile-clothing-leather sector is eligible for the collection tax credit mechanism, which is incorporated into the research tax credit (CIR). The tax credit is generally 30 per cent. For businesses that benefit from this mechanism for the first time or that have not benefited from it for a period of five years, the rate is raised to 50 per cent in the first year and then scaled down to 40 per cent in the second year. The eligible expenditures are: wages and social security contributions for fashion designers and technicians working in design firms responsible for designing new products and for production engineers and technicians responsible for the manufacture of prototypes or samples not intended for sale; depreciation of capital assets used to design new products or to manufacture prototypes or samples not intended for sale; filing fees for designs; protection costs for designs of up to 60,000 euros per year; and other operating expenditure.
- The *EPV tax credit* is for businesses operating under the label *"Enterprises du patrimoine vivant"* [Modern Heritage Enterprises] (EPV). This label applies to fashion industry companies (craft enterprises, sub-contractors), dealing in garments, accessories, leather goods or jewelry. The EPV label lrecognizes companies that are custodians of a certain economic heritage born of manufacturing experience or that have a rare skill developed through mastery of traditional or high-tech techniques that are specific to a particular region. To qualify for the label, companies must meet at least one criterion in each of the following three categories:
    - They must be custodians of a specific economic heritage: industrial property rights; production equipment; models, technical documentation; a significant customer network; or a rare skill developed through mastery of traditional or high-tech techniques.
    - They must be long-established in their geographical location or enjoy a longstanding reputation: the company should have been established at its current location for over fifty years or own premises that have a historical or architectural value; the company should also be carrying out production at its historical location.
    - They must have name/brand recognition, particularly as a result of national awards or mentions in reference publications, or because their business involves property that is protected heritage, such as historical monuments, brand items or furniture that perpetuate a specific style in French art.

According to the *Institut Supérieur des Métiers* [Higher Institute of Trades and Professions] (ISM), the EPV label applies to 1,112 firms, representing over 52,000 jobs and a cumulative annual turnover of more than 10 billion euros. This label gives entitlement to two possible tax credits, namely: increase of the apprenticeship tax credit to 2,200 euros per apprentice; and a creation tax credit of 15 per cent applied to the sum of wages and social contributions of workers directly assigned to the design of items produced as a single copy or in a limited series. This tax credit is capped at 30,000 euros per year per company.

Lastly, this support could be in the form of financial investment aid. The economic model of fashion designers (need for substantial working capital due to the long time lapse between the creation and marketing of collections, risks associated with the bandwagon effect), craft enterprises and subcontractors (dependence on certain major clients, international competition) makes it necessary to strengthen the financial structure of these companies. Moreover, several investment funds have been created and financed predominantly with public funds:

- The Fashion and Finance Investment Fund seeks to finance independent creative companies through equity investment. Such investment promotes the emergence of new brands crucial to the regeneration of the fashion and luxury goods industries and offsets the shortage of capital experienced by profitable businesses in these sectors. It has been decided to extend this investment policy to all segments of the luxury goods industry (accessories, leather goods, footwear, perfumes, cosmetics, watches, jewelry and

household textiles). The fund has also been expanded (12.4 million euros in assets under management) and extended by four years (investment period up to November 2017).

- The *Fonds pour le Savoirfaire d'Excellence* [Fund for Skills of Excellence] (FSFE) was established in 2013 with a provision of 20 million euros. Its purpose is to invest in independent French businesses with a turnover of more than 500,000 euros that exercise certain skills of excellence (labelled as *"Entreprises du patrimoine vivant"* or deemed to be close to such businesses in terms of compliance with the criteria for that label). Its range of intervention is 0.5 to 2 million euros.

Lastly, it should be noted that more short-term mechanisms may be established under public-private partnerships. The crisis which hit the sector in 2009 led to the drafting of a report aimed at saving French craft enterprises. The report recommended a contingency plan based on increased reliance on part-time unemployment, strengthening the equity of companies within the sector and an increase in business flows. In parallel to this "emergency plan", a sector consolidation structural plan was recommended in order to promote French creativity and knowhow, and also streamline and strengthen the sector. The report led to the signing on April 14, 2012 of a charter of best practices in the fashion and luxury sector, in order to establish *"constructive dialogue"* between brand companies and craft enterprises.[15]

4.3 Video games

The creation and production of video games, and of the platforms and consoles on which they are played, constitutes a major creative industry in France, although the country focuses more on the former than on the latter. The video game market in France (i.e., the consumption of video games by buyers in France) comprises several components, namely:

– video games *stricto sensu*: software sold in a physical or electronic format that can be operated on different platforms (home consoles or notebooks, computers, smart phones, tablets);

– video game platforms: some are designed primarily for video games (consoles) and others are multifunctional (smart phones, computers); and

– accessories and specialized media.

4.3.1 *Scope and situation of the market*

Assessments of the video game market will yield differing results depending on scope. The CNC estimated that physical video game sales in France amounted to 1.1 billion euros in 2012. IDATE (European Audiovisual and Telecommunications Institute) estimated that the sales of video games (both electronic and physical) and video game consoles amounted to 2.8 billion euros. Video game sales in France show that there is a steady decline in turnover and that French games have a minority share of the market. The sales turnover for physical video games on the French market is in sharp and steady decline. Between 2008 and 2012, the market lost nearly a third of its value, falling from 1.6 billion to 1.1 billion euros. Several factors account for this, namely:

- Aging: many home consoles released in 2005 and 2006 have been in use for eight years – consumers were therefore waiting for the next generation of consoles to be released on the market in late 2013 and early 2014 (Microsoft's Xbox One, Sony's PS4).

- The preference for dematerialized platforms, with online and smart phone purchases of video games.

Although its domestic market growth is sluggish, the French video game industry has an international presence. For instance, the report of the General Inspectorate of Finance and Culture indicated that the export rate was 24 per cent based on the tax returns of companies. This performance remains highly meritorious because even the very notion of export is a complex one to grasp in this case, in light of the interconnected nature of services on this market, the variety of payment methods (sale of rights or copyrights), the difficulty of defining an indicator of the nationality of products and sales and the traceability, even of foreign sales when, for instance, turnover transits through a platform that deducts a percentage (approximately 30 per cent). This performance notwithstanding, the world market share of the French video game industry did not

[15] Reille, C. (2009). *Report on an emergency plan for the French craft industry*.

grow above 6.1 per cent in 2012, compared to 6.5 per cent in 2011. The decline stems from the fact that consumption trends in a highly globalized market are increasingly uninfluenced by national cultural content and are increasingly dependent on international success.[16]

However, the picture is not altogether bleak because some dynamic trends are equally evident.

The consumer market is currently very broad and calls for product diversification rather than the release of the same product in a market segment in which competition is naturally very intense. It should also be noted that:

- this market has approximately two million gamers with highly varied game time durations; and
- the average age in this market is 35 years, and women account for 40 per cent of consumers.

Consequently, it is certainly not a market limited to a narrow segment of the population that demands the same product.

According to IDATE, the French video game market (i.e., games and gaming platforms) could be more dynamic over the next three years, especially the market for mobile phone games (+59 per cent) and online games (+41 per cent).[17] The envisaged (though uncertain) erosion of the video game consoles market (subject to major technical innovations) will be offset by the rise in mobile phone downloads, which would cut distribution costs. In 2012, online gaming on computers was the most dynamic segment of the dematerialized video game market in France. Its turnover was 417.5 million euros and it should attain an average annual growth rate of 9 per cent by 2016. It is likely, therefore, that a different environment is currently replacing the erstwhile environment of dedicated game consoles. This is why IDATE anticipates a 75 per cent increase in this market over the next three years.

4.3.2 *The video game value chain in France*

The video game value chain has four stages: the design of video games by development studios; production, financing and marketing by publishers; distribution by distribution networks and retailers; and maintenance and repair by technical and specialty service providers. Some basic statistics are available, thanks to the French Video Game Agency (AFJV).

Development studios

The first stage in the value chain is the design of video games by development studios. In 2011, France had 154 development studios with a total of 1,600 employees, which generated a turnover of 175 million euros, including 31 per cent for exports, and value added of 64 million euros (i.e., a value-added ratio of 70 per cent relative to turnover).[18] These are generally very small businesses with a workforce comprising authors and professionals (i.e. game designers, computer graphics designers, musicians, etc.). Consequently, they engage in heterogeneous activities, making it difficult to adopt a classic approach to productivity in terms of the division of labor and cost savings. This accounts for the proliferation of studios, their only unifying factor being the gaming engine specific to the studio.

Game concept formulation is generally funded by the developer or publisher. However, the pre-production phase, during which the prototype or computer demo is created, often requires the editor to contribute to the financing of the operation. That is the current trend, provided the publisher's contribution is not excessive, as is the case when dealing with "big games". In this relationship, development studios are generally dependent on publishers, who are relatively more limited in number and are more likely to bear the costs. As the CNC has estimated for assisted games, the average cost of a project was 3.5 million euros over the 2008-2011 period, although nearly 40 per cent of these products cost less than 0.5 million euros (36 per cent).

[16] CNC – GfK (2012). *The video game market*.
[17] IDATE, December 2012.
[18] Zalis. The total loss experience of video games, http://www.zalis.fr/la-sinistralite-du-jeu-video.php.

Video game publishers

Since they are responsible for the physical production of copies, define marketing strategies and determine the platforms on which the games can be played, the publishers have intellectual property rights. In general, they tend to diversify the platforms on which games can be played (PC, Xbox 360, 3DS, PS3, etc.), in a bid to reduce growing production and marketing costs. In 2011, France had 45 publishers with a total of 1,789 employees, generating a turnover of 1.8 billion euros, including 37 per cent for exports, and a value added of 0.5 billion euros (i.e., a rate of 26 per cent).[19]

These publishers are increasingly concentrated because the risk profile in this domain has changed. Like other cultural products, few products generate profits and an overall assessment shows that only 200 of the 5,000 titles produced generate returns on investment. To guarantee success, it is important to embark on a blockbuster strategy that would cost nearly 20 million euros over 3 years (especially for R&D and marketing). This evidently limits the number of potentially eligible publishers (e.g., Ubisoft, Take 2 and Activision).

The technical and specialized service providers

Specialized technical service providers are generally sub-contractors who provide the "blocks" for designing a part of the game (soundtrack, graphics, etc.) or a gaming medium (3D engine, etc.). Manufacturers of hardware and accessories constitute the largest component, representing 250 million euros of turnover for eleven companies employing 350 people. They are followed by the specialized video game media (143 million euros of turnover for 18 businesses employing 420 people) and other technical service providers (175 million euros of turnover for 129 companies employing 1,228 people).

Table 4.6. Workforce, turnover and value added of studios, publishers, distributors, service providers

	Workforce	Turnover	Value added
Studios	19%	4%	12%
Publishers	21%	37%	45%
Distributors	35%	31%	16%
Service providers	24%	11%	23%

Distributors

Although video game distributors were generalists in the early days, they have become increasingly specialized, or at least appear to be a specialized branch of large procurement entities. In 2011, they had a workforce of nearly 2,960 employees, producing a turnover of 1.5 billion euros, but with a low value added (172 million euros) and a low export rate (less than 6 per cent). It should also be noted that the three leading manufacturers of gaming consoles in the world (Sony, Nintendo and Microsoft) have subsidiaries in France that distribute home consoles, handheld consoles and games for a total turnover of 0.8 billion euros in 2011, with a total of 158 employees.

Their logistical performance is essential considering that more than 50 per cent of sales occur during the first week, which is an even shorter period than the one needed to guarantee the success of a film (three weeks). Moreover, they have to cope with the gradual dematerialization of distribution networks.

A more global overview of the value chain reveals that the total turnover of the sector is 4.8 billion euros, but the breakdown of value added is very different depending on the stage considered. While the publishers of these service providers benefit from relatively satisfactory sharing of the value added, the same cannot be said of distributors.

[19] Zalis: The total loss experience of video games: http://www.zalis.fr/la-sinistralite-du-jeu-video.php.

4.3.3 *Public support for video games in France*

Public support mechanisms essentially focus on the upstream segment of the sector and are geared toward developing the intellectual property emerging within that segment.

Firstly, there are a number of support mechanisms strictly for video games as follows:

- The Tax Credit for Expenditure on Video Game Creation (CIJV) enables France-based enterprises of the sector to deduct 20 per cent of eligible expenses from their income tax if their video game output helped to increase the diversity of games designed in France and Europe. This mechanism is authorized by the European Commission as one of the cultural subsidies and was renewed in 2012 for six years. It amounted to a tax expenditure of 7 million euros in 2012.

- The Video Game Assistance Fund (FAJV) has an average provision of 3 million euros per year, financed on a parity basis by the CNC and the Ministry of Industry. The assistance is provided following the recommendation of a committee of experts.

- Aid for the Creation of Intellectual Property, provided in the form of subsidies, was established in 2010, to encourage new creations and stimulate companies to build a heritage value for video games. In 2011, 38 applications (out of 93) were approved for the sum of 4.4 million euros.[20]

- In a bid to promote the French video game industry on the international market, an export label referred to as "Le Game" has been promoted since 2012 by sector stakeholders and the services concerned. Its existence should normally encourage the various services to work together in resolving the problems encountered by businesses on external markets.

In addition, there are a certain number of more general support mechanisms:

- Thanks to the Research Tax Credit (CIR), video game businesses may deduct a portion of their R&D expenditure from their corporate income, up to 30 per cent for the first installment, and then up to 5 per cent for the rest.

- The Innovation Tax Credit (CII), which has been in existence since 2013, is calculated based on the expenditure (staff, capital assets, patent procedures or filing of drawings) incurred by SMEs for the "design of prototypes or pilot installations of new products". It represents 20 per cent of the incurred costs and is capped at 80,000 euros. Development studios are particularly likely to benefit from this mechanism.

- Video game companies may benefit from the Innovative Young Enterprises (JEI) mechanism. They can benefit from tax exemptions and a reduction of social security contributions if they are independent, have been in business for less than eight years and show proof of a minimum expenditure on research.

- Support of a completely different nature can be obtained if the companies are located in the competitiveness poles, such as the famous Cap Digital located in Île-de-France. They then respond to calls for projects launched by public entities, provided they enter into a partnership with other companies operating in the same domain. Generally, this policy is not as attractive as the one implemented by other countries, such as Canada, which has instituted a refundable tax credit for the production of multimedia titles ranging from 30 per cent to 37.5 per cent of expenditure (compared to 20 per cent for the French CIJV). Also included in this category are employment premiums; exemptions from employer contributions; and staff support measures (tax exemptions and support in the form of real estate). This system has lured away a certain number of French studios and publishers, which have relocated to Canada. The biggest of them, Ubisoft, has barely 1,200 employees in France and but employs close to 3,000 in North America, whereas, a few years ago, almost all of its jobs were located in France.[21]

[20] Information from the *Report of the working group on the video games*, introduced by senators André Gattolin and Bruno Retailleau, 2013.
[21] SNJV, key figures, quoting from a 2012 Enterbrain study.

4.3.4 *Challenges*

Although the greatest challenge faced by companies in the sector is dematerialization, there are others.

Dematerialization

The first challenge relates to the dematerialization of gaming media. This essentially stems from the emergence of connected devices which have come with new uses, as evidenced by the time people spend gaming on their mobile phones (50 per cent) and tablets (25 per cent).[22] All the stakeholders of the sector, be they Apple with its Apple Store or pure players like Steam, clearly understand this. Projections suggest that in the near future, close to 90 per cent of games will be played on connected devices. Besides, there is a proliferation of innovations such as the *gameplay experience*, a gaming-on-demand process which does not require the player to download the game *(cloud gaming)*. It is sufficient for the device to be permanently connected for it to have real-time access to the catalog and downloads. This system, which makes prior software downloading unnecessary, is being adopted for a growing number of games and for sophisticated products that require significant bandwidth (e.g., OnLive and Gaikai).

Business model

Dematerialization changes the business model of video games by redefining the relationship between players and sector stakeholders. Such dematerialization, and the immense diversification of casual online games, makes the purchase of a video game *(pay-per-play)* pointless when online gamers are increasingly less willing to pay for access to games. For instance, 21 per cent of French consumers say they are willing to pay, but only 37 per cent of them are willing to pay more than 10 euros per year. Meanwhile, there are the economic models of free games with payment options (*freemium* or *free2play*), on computers of massively multiplayer online (MMO) games; or games on social media, smartphones and tablets, or even connected laptops and television sets. *Free2play* games are indeed online games, parts or the entirety of which can be played for free. Such games are generally financed through in-app purchases of game items, optional services or advertising (on a fee-for-service basis). Conversely, it is not at all certain that this model can be applied to dedicated terminals.

To the extent that the traditional model continues to exist, the current concern is more about selling "services" than selling "software". The objective is no longer to sell a complete game, but rather to engage players in a long-term relationship based on an interactive experience that is often free at the beginning, but that subsequently involves small, regular payments. Consequently, the idea is to generate a kind of regular income stream from players by proposing content that prolongs the life expectancy of the game. This model is not easy to implement and certain companies like Zynga have learned this to their cost.

Redefinition of intraindustry relations

Dematerialization leads to changes in the relationship between sector stakeholders, particularly the elimination of intermediaries and a direct relationship with the player. It could even enable the studio to become independent by offering it the opportunity to become a publisher and funder of its own video game creation. This could have major implications for intellectual property rights.

In the traditional model, the publisher funding the creation gains control of all property rights. Currently, the studios that publish their own games can benefit more from the heritage value of their productions, provided they diversify their expertise – not always an easy task. At the other extreme of the chain, such dematerialization is a danger to video game distributors. For instance, the video game distributor GAME, which had 750 employees and 200 shops, filed for bankruptcy in early 2013 after going into receivership in September 2012.

[22] National Video Game Trade Union. *Video games in France in 2012, key elements.*

Gamification

As previously stated, the market for video game customers is expanding and now comprises widely divergent categories. From a market of enthusiasts, it is gradually diversifying its customer base. This is accompanied by a diversification of content and, in particular, the development of *gamification*, or video game techniques (rewards, challenges, progress) and technologies that target professionals and home users. This has given rise to *serious games*, which are applications developed for companies and services to enable them to deliver a message of awareness and even to support their skills development. SNJV believes that the gamification market is worth approximately 50 million euros, with an annual growth rate of 15 per cent.

Copyright

Since the balance of power is not tilted in their favor, the studios tend to focus on providing services, thereby abandoning all or part of their intellectual and industrial property rights. Furthermore, internationalized production leads to the interplay of often disparate legislations. The situation is compounded by French case law, which has long prevaricated on the exact nature of a video game: is it software? Is it an audiovisual production? Is it a collective work? This has given rise to complex contracts which are hard to sell to foreign partners. Hence, publishers protect themselves by dealing directly with all the salaried stakeholders and sub-contractors of the developer.

Conclusion

Applying the WIPO guide to French national accounts (2012) and analysing a number of official reports from the ministries of finance, industry and culture has made it possible to present an initial overview of CIs in France. Four main lessons emerge.

1. In France, CIs accounted for 7.02 per cent of GDP, 7.29 per cent of full-time equivalent employment, 6.48 per cent of the employed labor force, 9.54 per cent of exports and 11.46 per cent of imports. A comparison with past trends (1999-2011) shows that these percentages are changing slowly, but that they are also changing the relative shares of the four cultural industry categories. Essential (or "core") industries, which are more significant in terms of value added and jobs, are evolving slowly over time and have a positive external balance. In contrast, the partial industries, which are closer to the world market than the core industries, are subject to more rapid fluctuations and plagued by a negative external trade balance. Non-dedicated support industries are fairly close to partial industries and mirror their characteristics, albeit to a much lesser degree. Independent industries are so weak that few lessons can be drawn from their checkered performance.

   These trends are significant and are, to a certain extent, consistent with those found in similar studies conducted recently in France. For instance, there is a parallel between core CIs and cultural activities as understood by the government (approximately 3.7 per cent). The more general difference (between approximately 3.5 per cent in cultural sector studies and 7.02 per cent in French studies) stems from the fact that WIPO projections consider all the intricacies of the connection between these activities and others and evidently view eligibility for copyright as not based solely on traditional cultural activities but as applicable regardless of the industry under consideration. This explains why the percentage has almost doubled.

   Furthermore, at a time of acute employment in France, there is high performance in the industry in terms of the number of persons employed, or full-time equivalent employment. This figure is important because it shows that there is employment stability in CIs that does not really exist in other sectors of the economy. This is certainly because skilled occupations are concerned.

2. Conversely, the somehow disappointing performance in terms of external trade or productivity is striking.

   The external trade situation is revealing in this case: the balance is positive for the core CIs but negative for all other categories. As has been suggested, this reflects the poor external trade performance of the French economy during the last decade. It also suggests that the spinoffs expected to be generated by core CIs, and by copyrights more generally, have not had the expected effect in society.

   Productivity analysis has also been challenged. The productivity of CIs never exceeds the average within the economy and is, in fact, often lower. One explanation could be the cost disease or the non-substitution of capital for labor that is inherited from the economics of culture. While this may be true for some core CIs (at best), it obviously cannot explain the overall performance of CIs.

3. Certain factors, which are cyclical or specific to the French economy, may shed some light on these issues. However, it is more interesting to note that the hard core of CIs, which accounts for almost 50 per cent of CIs, does not also seem to generate the expected knock-on effects. In light of the analyses and discussions of this study, it would appear that in France the concept of copyright is considered more from a "defensive" rather than an "offensive" standpoint. Copyright is more of a right than a lever, and it is not easily perceived to be a strategy that can be used to build knowledge and expertise and consequently enrich all the value chains that may arise from it.

4. This means, therefore, that there is room for a much broader copyright policy. The challenge is not solely that of protection *stricto sensu* because its provisions are dense, varied and constantly being amended to keep abreast of technical and technological changes.

   The challenge rather lies in recognizing the potential of such rights, especially in areas where they are thought to be the preserve of writers and artists. It is quite obvious that since design and modelling have become two of the most important levers of global economic development, it is crucial to raise awareness

of copyright in the broadest sense of the term and of the application of such rights to the entire value chain. Moreover, it should not be forgotten that these statistical analyses, however relevant they may be, do not consider these rights as capital whose benefits accumulate over time, such that instant indicators fail to capture their full reality and potential.

Annexes

The annexes bear the title of the table quoted in the report. They correspond to the basic tables used to present the data in Chapters 2 and 3.

Table 2.4.a. Aggregate coefficients for value added: Core CIs

LEVEL	Sector of activity	Activity	Value-added	Coefficients as % of sector	Copyright %	E*F	Final branch coeff.
a88	18	Printing and reproduction of recorded media	3,991.1				0.14
a732	1811Z	Printing of newspapers	100.8	0.025	1	0.025	
a732	1813Z	Start-up activities	802.7	0.2	0.5	0.1	
a732	1820Z	Reproduction of recorded media	98.1	0.024	0.5	0.012	
a88	46	Wholesale trade, except of motor vehicles and motorcycles	98,901.9	1	0.0	0	0.045
a732	4651Z	Wholesale (intercompany trade) of computers, computer peripheral equipment and software	2,538.1	0.025	1	0.025	
a732	4652Z	Wholesale (intercompany trade) of electronic and telecommunications equipment and parts	1,847.3	0.02	1	0.02	
a88	47	Retail trade, except of motor vehicles and motorcycles	77,740.7				0.034
a732	4741Z	Retail sale of computers, peripheral units and software in specialized stores	852.7	0.01	1	0.01	
a732	4761Z	Retail sale of books in specialized stores	468.2	0.006	1	0.006	
a732	4762Z	Retail sale of newspapers and stationery in specialized stores	753.9	0.01	1	0.01	
a732	4763Z	Retail sale of music and video recordings in specialized stores	64.7	0.008	1	0.008	
a88	58	Publishing activities	10,747.9				0.88
a732	5811Z	Book publishing	1,345.4	0.125	1	0.125	
a732	5812Z	Publishing of directories and mailing lists	14.6	0.001	1	0.001	
a732	5813Z	Publishing of newspapers	1,881.3	0.17	1	0.17	
a732	5814Z	Publishing of journals and periodicals	2,289.1	0.21	1	0.21	
a732	5819Z	Other publishing activities	165.6	0.015	1	0.015	
a732	5821Z	Publishing of computer games	393.5	0.036	1	0.036	
a732	5829A	System and network software publishing	713.9	0.07	1	0.07	
a732	5829B	Development tools and programming languages software publishing	207.3	0.02	1	0.02	
a732	5829C	Application software publishing	3,737.3	0.35	1	0.35	
a88	59	Motion picture, video and television program production, sound recording and music publishing activities	6,451.1	1	1	1	0.91
a732	5911A	Production of motion pictures for television and television programs	2,148.8	0.33	1	0.33	
a732	5911B	Production of institutional and promotional motion pictures	536.0	0.08	1	0.08	

Table 2.4.a. Aggregate coefficients for value added: Core CIs (continued)

a732	5911C	Production of motion pictures for cinema	1,379.1	0.21	1	0.21	
a732	5912Z	Motion picture, video and television program distribution activities	1,000.2	0.15	1	0.15	
a732	5913A	Motion pictures for cinema distribution	381.1	0.06	1	0.06	
a732	5913B	Video edition and distribution	132.8	0.02	1	0.02	
a732	5920Z	Sound recording and music publishing activities	429.5	0.06	1	0.06	
a88	60	Programming and broadcasting activities	4,068.9				1
a732	6010Z	Radio broadcasting	697.6	0.17	1	0.17	
a732	6020A	Broadcast of general-interest television programs	3,140.0	0.77	1	0.77	
a732	6020B	Broadcast of thematic television programs	231.4	0.06	1	0.06	
a88	62	Computer programming, consultancy and related activities	24,431.9	1	1	1	0.76
a732	6201Z	Computer programming activities	4,119.7	0.16	0.8	0.128	
a732	6202A	Hardware and software consultancy	14,537.9	0.6	0.8	0.48	
a732	6203Z	Computer facilities management activities	4,056.2	0.15	1	0.15	
a732	6209Z	Other information technology and computer service activities	150.8	0.006	1	0.006	
a88	63	Information service activities	3,423.2	1	1	1	0.15
a732	6391Z	News agency activities	524.8	0.15	1	0.15	
a88	73	Advertising and market research	8,848.8	1	1	1	0.85
a732	7311Z	Advertising agencies	4,733.7	0.53	1	0.53	
a732	7312Z	Media representation	2,803.7	0.32	1	0.32	
a88	74	Other professional, scientific and technical activities	3,156.0	1	1	1	0.5
a732	7410Z	Specialized design activities	722.4	0.23	1	0.23	
a732	7420Z	Photographic activities	502.5	0.16	1	0.16	
a732	7430Z	Translation and interpretation activities	339.2	0.11	1	0.11	
a88	90	Creative, arts and entertainment activities	1,754.9	1	1	1	0.99
a732	9001Z	Performing arts	571.0	0.32	1	0.32	
a732	9002Z	Support activities to performing arts	709.4	0.4	1	0.4	
a615	9003	Artistic creation	291.2	0.17	1	0.17	
a732	9004Z	Operation of arts facilities	183.3	0.1	1	0.1	

Source: ESANE database, INSEE, 2009, and calculations from copyright coefficients

Table 2.4.b. Aggregate coefficients for value-added: Interdependent CIs

LEVEL	Sector	Activity	VA	Coefficient as % of sector	Copyright coef.	E*F	Branch coeff.
a88	17	Manufacture of paper and paper products	4,419.9				0.135
a732	1712Z	Manufacture of paper and paperboard	1,200.8	0.27	0.5	0.135	
a88	26	Manufacture of computer, electronic and optical products	10,277.3				0.41
a732	2611Z	Manufacture of electronic components	2,206.6	0.21	0.8	0.168	
a732	2612Z	Manufacture of loaded electronic boards	1,398.6	0.13	0.8	0.104	
a732	2620Z	Manufacture of computers and peripheral equipment	256.0	0.002	0.8	0.0016	
a732	2630Z	Manufacture of communication equipment	1,279.9	0.135	0.9	0.13	
a732	2640Z	Manufacture of consumer electronics	104.1	0.001	0.5	0.0005	
a732	2670Z	Manufacture of optical instruments and photographic equipment	212.7	0.002	0.8	0.0016	
a732	2680Z	Manufacture of magnetic and optical media	5.3	0.0001	0.8	0.00008	
a88	28	Manufacture of machinery and equipment n.e.c.	12,782.2				0.004
a732	2899A	Manufacture of printing machinery	111.7	0.008	0.5	0.004	
a88	32	Other manufacturing	4,935.6				0.02
a732	3220Z	Manufacture of musical instruments	108.57	0.022	0.9	0.02	
a88	47	Retail trade, except of motor vehicles and motorcycles	77,740.7				0.01
a732	4743Z	Retail sale of audio and video equipment in specialized stores	201.9	0.002	0.3	0.0006	
a732	4763Z	Retail sale of music and video recordings in specialized stores	64.7	0.001	0.3	0.0003	
a88	77	Rental and leasing activities	15,159.2				0.2
a732	7722Z	Renting of video tapes and disks	S	0.2	1	0.2	
a88	95	Repair of computers and personal and household goods	2,865.6	1	1	1	0.07
a732	9511Z	Repair of computers and peripheral equipment	1,428.5	0.5	0.1	0.05	
a732	9512Z	Repair of communication equipment	379.2	0.14	0.1	0.014	
a732	9521Z	Repair of consumer electronics	181.6	0.06	0.5	0.03	

Source: ESANE database, INSEE, 2009, and calculations from copyright coefficients

Table 2.4.c. Aggregate coefficients for value-added: Partial CIs

Sector	Activity	A. Value added	B. %	Copyright coeff.	D= B*C	Branch %
13	Manufacture of textiles	2,357.0				**0.135**
1392Z	Manufacture of made-up textile articles, except apparel	653.2	0.27	**0.5**	0.135	
14	Manufacture of wearing apparel	2,172.7				**0.43**
1411Z	Manufacture of leather clothes	28.0	0.013	**0.6**	0.007	
1412Z	Manufacture of workwear	89.5	0.04	**0.6**	0.024	
1413Z	Manufacture of other outerwear	1,012.4	0.48	**0.6**	0.280	
1414Z	Manufacture of underwear	402.1	0.18	**0.6**	0.110	
1420Z	Manufacture of articles of fur	16.9	0.01	**0.6**	0.06	
1431Z	Manufacture of knitted and crocheted hosiery	236.8	0.11	**0.6**	0.06	
1439	Manufacture of other knitted and crocheted apparel	97.6	0.04	**0.6**	0.02	
15	Manufacture of leather and related products	1,560.7				**0.87**
1512Z	Manufacture of luggage, handbags and the like, saddlery and harness	1,109.2	0.71	**0.9**	0.73	
1520Z	Manufacture of footwear	356.1	0.23	**0.6**	0.14	
16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	3,247.3				**0.2**
1621Z	Manufacture of veneer sheets and wood-based panels	332.4	0.1	**0.3**	0.03	
1622Z	Manufacture of assembled parquet floors	-52.9	0.02	**0.3**	0.006	
1623Z	Manufacture of other builders' carpentry and joinery	1,080.3	0.33	**0.3**	0.099	
1624Z	Manufacture of wooden containers	676.9	0.21	**0.3**	0.063	
1629Z	Manufacture of other products of wood; manufacture of articles of cork, straw and plaiting materials	273.0	0.08	**0.3**	0.024	
17	Manufacture of paper and paper products	4,419.9				**0.17**
1711Z	Manufacture of pulp	149.8	0.04	**0.5**	0.02	
1722Z	Manufacture of household and sanitary goods and of toilet requisites	560.6	0.12	**0.5**	0.06	
1723Z	Manufacture of paper stationery	285.6	0.07	**0.5**	0.035	
1724Z	Manufacture of wallpaper	8.3	0.002	**0.5**	0.001	
1729Z	Manufacture of other articles of paper and paperboard	452.8	0.11	**0.5**	0.055	
18	Printing and reproduction of recorded media	3,991.1				**0.025**
1814Z	Binding and related services	193.6	0.05	**0.5**	0.025	
23	Manufacture of other non-metallic mineral products	8,471.3				**0.08**
2319Z	Manufacture and processing of other glass, including technical glassware	141.0	0.02	**0.5**	0.01	
2341Z	Manufacture of ceramic household and ornamental articles	144.5	0.02	**0.5**	0.01	
2349Z	Manufacture of other ceramic products	100.0	0.01	**0.5**	0.05	
2370Z	Cutting, shaping and finishing of stone	405.6	0.05	**0.8**	0.040	
25	Manufacture of fabricated metal products, except machinery and equipment	19,028.6				**0.047**
2599A	Manufacture of household fabricated metal articles	209.4	0.011	**0.8**	0.009	
2599B	Manufacture of other fabricated metal articles	1300	0.064	**0.6**	0.038	
32	Other manufacturing	4,935.6				**0.34**

Table 2.4.c. Aggregate coefficients for value-added: Partial CIs (continued)

3212Z	Manufacture of jewelry and related articles	447.1	0.09	**0.8**	0.072	
3213Z	Manufacture of imitation jewelry and related articles	113.6	0.23	**0.6**	0.138	
3240Z	Manufacture of games and toys	118.3	0.23	**0.8**	0.184	
46	Wholesale trade, except of motor vehicles and motorcycles	98,901.9				**0.021**
4624Z	Wholesale (intercompany trade) of hides, skins and leather	60.9	0.001	**0.6**	0.0007	
4642Z	Wholesale (intercompany trade) of clothing and footwear	3,161.3	0.03	**0.6**	0.021	
4648Z	Wholesale (intercompany trade) of watches and jewelry	395.6	0.004	**0.6**	0.0028	
47	Retail trade, except of motor vehicles and motorcycles	77,740.7				**0.090**
4753Z	Retail sale of carpets, rugs, wall and floor coverings in specialized stores	237.2	0.003	**0.7**	0.0021	
4765Z	Retail sale of games and toys in specialized stores	349.6	0.004	**0.7**	0.0028	
4771Z	Retail sale of clothing in specialized stores	6,800.0	0.09	**0.7**	0.063	
4772A	Retail sale of footwear	1,351.5	0.02	**0.7**	0.014	
4772B	Retail sale of fine leather goods and of travel articles	527.9	0.005	**0.7**	0.003	
4777Z	Retail sale of watches and jewelry in specialized stores	1,075.2	0.01	**0.4**	0.0036	
71	Architectural and engineering activities; technical testing and analysis	24,630.4				**0.69**
7111Z	Architectural activities	4,127.8	0.17	**0.9**	0.153	
7112B	Engineering, technical studies	16,191.9	0.66	**0.8**	0.528	
91	Libraries, archives, museums and other cultural activities	125.0	1	**0.8**	0.8	**0.8**

Table 2.4.d. **Aggregate coefficients for value-added: Non-dedicated support CIs**

LEVEL	Sector	Activity	Value added	Sector coeff.	Copyright %	E*F	Branch coeff.
a88	46	Wholesale trade, except of motor vehicles and motorcycles	98,901.9				0.03
a732	4611Z	Agents involved in the sale of agricultural raw materials, live animals, textile raw materials and semi-finished goods	168.9	0.001	0.03	0.00003	
a732	4612A	Automotive fuel buying groups	2,672.4	0.028	0.03	0.00084	
a732	4612B	Other agents involved in the sale of fuels, ores, metals and industrial chemicals	347.0	0.002	0.03	0.00006	
a732	4613Z	Agents involved in the sale of timber and building materials	180.9	0.001	0.03	0.00003	
a732	4614Z	Agents involved in the sale of machinery, industrial equipment, ships and aircraft	704.9	0.004	0.03	0.00012	
a732	4615Z	Agents involved in the sale of furniture, household goods, hardware and ironmongery	109.3	0.001	0.05	0.00005	
a732	4616Z	Agents involved in the sale of textiles, clothing, fur, footwear and leather goods	332.5	0.002	0.2	0.0004	
a615	4617	Agents involved in the sale of food, beverages and tobacco	1,705.7	0.02	0.03	0.0006	
a732	4618Z	Agents specialized in the sale of other particular products	1,317.4	0.01	0.03	0.0003	
a615	4619	Agents involved in the sale of a variety of goods	2,929.6	0.029	0.05	0.00145	
a272	462	Wholesale of agricultural raw materials and live animals	3,866.7	0.033	0.01	0.00033	
a272	463	Wholesale of food, beverages and tobacco	22,059.8	0.24	0.03	0.0072	
a272	464	Wholesale of household goods	23,386.0	0.25	0.05	0.0125	
a272	466	Wholesale of other machinery, equipment and supplies	14,804.0	0.15	0.05	0.0075	
a272	467	Other specialized wholesale	17,248.5	0.16	0.05	0.008	
a272	469	Non-specialized wholesale trade	2,683.1	0.027	0.03	0.00081	
a88	47	Retail trade, except of motor vehicles and motorcycles	77,740.7			0	0.1
a272	471	Retail sale in non-specialized stores	26,478.0	0.16	0.1	0.016	
a272	472	Retail sale of food, beverages and tobacco in specialized stores	4,211.2	0.038	0.1	0.0038	
a732	4751Z	Retail sale of textiles in specialized stores	257.2	0.002	0.3	0.0006	
a615	4752	Retail sale of hardware, paints and glass in specialized stores	4,530.5	0.039	0.3	0.0117	
a732	4764Z	Retail sale of sporting equipment in specialized stores	1,672.2	0.015	0.3	0.0045	
a732	4778C	Other sundry specialized retail sale	1,312.6	0.01	0.3	0.003	
a615	4779	Retail sale of second-hand goods in stores	520.2	0.003	0.1	0.0003	
a272	478	Retail sale via stalls and markets	1,466.8	0.014	0.1	0.0014	
a615	4791	Retail sale via mail order houses or via Internet	2,124.0	0.021	0.1	0.0021	
a615	4799	Other retail sale not in stores, stalls or markets	1,254.7	0.01	0.1	0.001	
a732	4799A	Door-to-door sale	733.6	0.004	0.5	0.002	
a88	49	Land transport and transport via pipelines	37,900.7	1	0.08	0.08	0.04

Table 2.4.d. Aggregate coefficients for value-added: Non-dedicated support CIs (continued)

a732	4920Z	Freight rail transport	79.9	0.002	0.08	0.00016	
a732	4941A	Interurban freight transport by road	8,159.3	0.22	0.08	0.0176	
a732	4941B	Proximity freight transport by road	5,348.0	0.14	0.08	0.0112	
a88	51	Air transport	5,344.4	0.14	0.08	0.0112	0.1
a88	52	Warehousing and support activities for transportation	23,903.4	0.76	0.08	0.0608	0.11
a732	5210B	Non-refrigerating warehousing and storage	3,571.8	0.09	0.08	0.0072	
a732	5221Z	Service activities incidental to land transportation	9,367.9	0.24	0.08	0.0192	
a732	5222Z	Service activities incidental to water transportation	633.5	0.006	0.08	0.00048	
a732	5223Z	Service activities incidental to air transportation	2,703.5	0.06	0.08	0.0048	
a615	5224	Cargo handling	1,016.4	0.12	0.08	0.0096	
a88	53	Postal and courier activities	11,203.5	1	0.08	0.08	0.0012
a732	5320Z	Other postal and courier activities	183.9	0.015	0.08	0.0012	
a88	61	Telecommunications	30,404.8	1	0.08	0.08	0.08
a732	6110Z	Wired telecommunications activities	14,989.6	0.5	0.08	0.04	
a732	6120Z	Wireless telecommunications activities	12,742.6	0.4	0.08	0.032	
a732	6130Z	Satellite telecommunications activities	1,592.4	0.05	0.08	0.004	
a272	619	Other telecommunications activities	1,080.3	0.04	0.08	0.0032	
a88	63	Information service activities	3,423.2	1	0.08	0.08	0.01
a732	6312Z	Web portals	274.0	0.08	0.8	0.064	
a88	79	Travel agency, tour operator and other reservation service and related activities	1,867.9	1	0.8	0.8	0.66
a732	7911Z	Travel agency activities	1,114.5	0.61	0.8	0.488	
a732	7912Z	Tour operator activities	388.7	0.21	0.8	0.168	

Source: ESANE database, INSEE, 2009, and calculations from copyright coefficients

Table 2.4.e. Total domestic employment per branch in number of FTE jobs: Core CIs

		2012	Coefficient	2012
A88.18	Printing and reproduction of recorded media	79.9	0.420	33.5
46	Wholesale trade	1,143.0	0.020	22.9
47	Retail trade	1,856.8	0.040	74.3
58	Publishing activities	121.7	0.99	120.4
59	Motion picture, video and television program production, sound recording and music publishing activities	58.8	0.93	54.7
60	Programming and broadcasting activities	28.6	1.0	28.6
From 38 to 62	Computer programming, consultancy and related activities	352.3	0.67	236.0
From 88 to 63	Information service activities	63.6	0.08	5.1
73	Advertising and market research	149.5	0.84	125.6
74	Other professional, scientific and technical activities	59.9	0.50	29.9
90	Creative, arts and entertainment activities	224.8	1.0	224.8
	Total core CIs			**955.9**
	Total for branches	**25,468.1**		**25,468.1**
	Percentage			3.74

Source: National accounts and calculations based on employment conversion coefficients

Table 2.4.f. Total domestic employment per branch in number of FTE jobs: Interdependent CIs

A88.17	Manufacture of paper and paper products	63.2	0.125	7.898
,A8826	Manufacture of computer, electronic and optical products	110.8	0.5	55.424
A38.28	Manufacture of machinery and equipment n.e.c.	166.3	0.001	0.166
A88.31	Manufacture of furniture	61.7	0.042	2.593
A88.32	Other manufacturing	77.4	0.020	1.547
47	Retail trade, except of motor vehicles	1,856.8	0.001	1.857
77	Rental and leasing activities	115.7	0.020	2.314
95	Repair of computers and personal and household goods	93.0	0.07	6.508
	Total Interdependent CIs			**78.31**
	Total of branches	**25,468.1**		**25,468.0**
TOTAL				**0.31**

Source: National accounts and calculation from employment conversion coefficients

Table 2.4.g. Total domestic employment per branch in number of FTE jobs: Partial CIs

NI		Activity	FTE jobs	Sec/br %	Copyright coeff. (%)	Sum	
a88	13	Manufacture of textiles	42,478.0				**0.145**
a732	1392Z	Manufacture of made-up textile articles, except apparel	12,151.0	0.29	**0.5**	0.145	
a88	14	Manufacture of wearing apparel	39,706.0				**0.54**
a732	1411Z	Manufacture of leather clothes	559.0	0.01	**0.6**	0.006	
a732	1412Z	Manufacture of workwear	1,822.0	0.05	**0.6**	0.030	
a732	1413Z	Manufacture of other outerwear	17,160.0	0.43	**0.6**	0.30	
a732	1414Z	Manufacture of underwear	8,800.0	0.22	**0.6**	0.13	
a732	1420Z	Manufacture of articles of fur	261.0	0.005	**0.6**	0.003	
a732	1431Z	Manufacture of knitted and crocheted hosiery	4,154.0	0.12	**0.6**	0.07	
a88	15	Manufacture of leather and related products	22,188.0				**0.77**
a732	1512Z	Manufacture of luggage, handbags and the like, saddlery and harness	14,253.0	0.63	**0.9**	0.57	
a732	1520Z	Manufacture of footwear	6,354.0	0.3	**0.6**	0.18	
a88	16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	61,314.0				**0.21**
a732	1621Z	Manufacture of veneer sheets and wood-based panels	6,219.0	0.1	**0.3**	0.03	
a732	1622Z	Manufacture of assembled parquet floors	1,147.0	0.03	**0.3**	0.009	
a732	1623Z	Manufacture of other builders' carpentry and joinery	20,001.0	0.32	**0.3**	0.096	
a732	1624Z	Manufacture of wooden containers	12,087.0	0.19	**0.3**	0.057	
a732	1629Z	Manufacture of other products of wood; manufacture of articles of cork, straw and plaiting materials	4,943.0	0.07	**0.3**	0.021	
a88	17	Manufacture of paper and paper products	62,771.0				**0.11**

Table 2.4.g. Total domestic employment per branch in number of FTE jobs: Partial CIs (continued)

a732	1711Z	Manufacture of pulp	1,014.0	0.016	**0.5**	0.008	
a732	1722Z	Manufacture of household and sanitary goods and of toilet requisites	7,096.0	0.12	**0.5**	0.06	
a732	1723Z	Manufacture of paper stationery	4,638.0	0.07	**0.5**	0.035	
a732	1724Z	Manufacture of wallpaper	169.0	0.003	**0.5**	0.0015	
a732	1729Z	Manufacture of other articles of paper and paperboard	6,804.0	0.011	**0.5**	0.0055	
a88	18	Printing and reproduction of recorded media	65,525.0				**0.03**
a732	1814Z	Binding and related services	4,099.0	0.06	**0.5**	0.03	
a88	23	Manufacture of other non-metallic mineral products	110,144.0				**0.093**
a732	2319Z	Manufacture and processing of other glass, including technical glassware	2,489.0	0.023	**0.5**	0.012	
a732	2341Z	Manufacture of ceramic household and ornamental articles	3,212.0	0.029	**0.5**	0.015	
a732	2349Z	Manufacture of other ceramic products	S	0.02	**0.5**	0.01	
a732	2370Z	Cutting, shaping and finishing of stone	7,420.0	0.07	**0.8**	0.056	
a88	25.0	Manufacture of fabricated metal products, except machinery and equipment	292,768.0				**0.035**
a732	2599A	Manufacture of household fabricated metal articles	2,540.0	0.008	**0.8**	0.006	
a732	2599B	Manufacture of other fabricated metal articles	14,010.0	0.048	**0.6**	0.029	
a88	32	Other manufacturing	62,440.0				**0.014**
a732	3212Z	Manufacture of jewelry and related articles	5,264.0	0.016	**0.8**	0.013	
a732	3213Z	Manufacture of imitation jewelry and related articles	1,631.0	0.006	**0.6**	0.001	
a732	3240Z	Manufacture of games and toys	1,788.0	0.007	**0.8**	0.0035	
a88	46	Wholesale trade, except of motor vehicles and motorcycles	927,783.0				**0.023**
a732	4624Z	Wholesale (intercompany trade) of hides, skins and leather	674.0	0.001	**0.6**	0.0005	
a732	4642Z	Wholesale (intercompany trade) of clothing and footwear	29,532.0	0.03	**0.6**	0.018	
a732	4648Z	Wholesale (intercompany trade) of watches and jewelry	3,664.0	0.01	**0.6**	0.006	
a88	47	Retail trade, except of motor vehicles and motorcycles	1,345,136.0				**0.028**
a732	4753Z	Retail sale of carpets, rugs, wall and floor coverings in specialized stores	4,559.0	0.003	**0.7**	0.0021	
a732	4765Z	Retail sale of games and toys in specialized stores	7,333.0	0.006	**0.7**	0.004	
a732	4771Z	Retail sale of clothing in specialized stores	S	0.005	**0.7**	0.003	
a615	4772	Retail sale of footwear and leather goods in specialized stores	29,561.0	0.021	**0.7**	0.015	
a732	4777Z	Retail sale of watches and jewelry in specialized stores	14,977.0	0.01	**0.4**	0.004	
a88	71	Architectural and engineering activities; technical testing and analysis	299,422.0	1		1	**0.62**
a732	7111Z	Architectural activities	32,311.0	0.11	**0.9**	0.099	
a732	7112B	Engineering, technical studies	194,631.0	0.65	**0.8**	0.52	
a88	91	Libraries, archives, museums and other cultural activities	4,346.0	1	**0.8**	0.8	**0.8**

Source: National accounts and calculations from coefficients of value-added

Table 2.4.h. Total domestic employment per branch in number of FTE jobs: Non-dedicated support CIs

		2012	Coefficient	2012
A88.46	Wholesale trade, except of motor vehicles and motorcycles	1,064.8	0.03	31.9
A88.47	Retail trade, except of motor vehicles and motorcycles	1,862.8	0.15	279.4
A88.49	Land transport and transport via pipelines	767.0	0.03	23.0
A88.51	Air transport	63.7	0.08	5.1
A88.52	Warehousing and support activities for transportation	247.0	0.11	27.2
A88.53	Postal and courier activities	224.6	0.01	2.2
A38.61	Telecommunications	127.5	0.07	8.9
A88.63	Information service activities	65.7	0.06	3.9
A88.79	Travel agency, tour operator and other reservation service and related activities	48.9	0.65	31.8
				413.5
TOTAL	**Total for branches**	**25,495.1**		**25,495.1**
				1.62%

Table 2.4.i. Aggregate coefficients for employment: Core CIs

LEVEL	Sector	Activity	ETP	Sec. %	Copyr. %		Branch %
a88	18	Printing and reproduction of recorded media	65,525.0	1	1	1	0.42
a732	1811Z	Printing of newspapers	1,392.0	0.21	1	0.21	
a732	1813Z	Start-up activities	10,805.0	0.17	0.5	0.085	
a732	1820Z	Reproduction of recorded media	1,711.0	0.26	0.5	0.13	
a88	46	Wholesale trade, except of motor vehicles and motorcycles	927,783.0	1	1	1	0.043
a732	4651Z	Wholesale (intercompany trade) of computers, computer peripheral equipment and software	24,108.0	0.025	1	0.025	
a732	4652Z	Wholesale (intercompany trade) of electronic and telecommunications equipment and parts	17,486.0	0.018	1	0.018	
a88	47	Retail trade, except of motor vehicles and motorcycles	1,345,136.0	1	1	1	0.02
a732	4741Z	Retail sale of computers, peripheral units and software in specialized stores	14,433.0	0.01	0.05	0.0005	
a732	4761Z	Retail sale of books in specialized stores	10,843.0	0.01	0.05	0.0005	
a732	4762Z	Retail sale of newspapers and stationery in specialized stores	S	0.01	0.05	0.0005	
a732	4763Z	Retail sale of music and video recordings in specialized stores	S	0.01	0.05	0.0005	
a88	58	Publishing activities	115,220.0	1	1	1	0.99
a732	5811Z	Book publishing	12,823.0	0.14	1	0.14	
a732	5812Z	Publishing of directories and mailing lists	283.0	0.002	1	0.002	
a732	5813Z	Publishing of newspapers	27,285.0	0.23	1	0.23	
a732	5814Z	Publishing of journals and periodicals	24,030.0	0.21	1	0.21	
a732	5819Z	Other publishing activities	2,348.0	0.02	1	0.02	
a732	5821Z	Publishing of computer games	1,824.0	0.015	1	0.015	
a615	5829	Other software publishing	46,627.0	0.4	1	0.4	

Table 2.4.i **Aggregate coefficients for employment: Core CIs (contineued)**

a88	59	Motion picture, video and television program production, sound recording and music publishing activities	43,249.0	1	1	1	0.93
a615	5911	Motion picture, video and television program production activities	19,600.0	0.44	1	0.44	
a615	5912	Motion picture, video and television program distribution activities	10,153.0	0.23	1	0.23	
a615	5913	Motion picture, video and television program distribution activities	3,171.0	0.07	1	0.07	
a732	5920Z	Sound recording and music publishing activities	3,578.0	0.09	1	0.09	
a88	60	Programming and broadcasting activities	28,534.0	1	1	1	1
a732	6010Z	Radio broadcasting	9,044.0	0.32	1	0.32	
a615	6020	Television programming and broadcasting activities	19,490.0	0.68	1	0.68	
a88	62	Computer programming, consultancy and related activities	267,676.0	1	1	1	0.67
a732	6201Z	Computer programming activities	44,621.0	0.16	0.8	0.128	
a732	6202A	Hardware and software consultancy	161,438.0	0.6	0.8	0.48	
a732	6203Z	Computer facilities management activities	43,341.0	0.16	1	0.16	
a732	6209Z	Other information technology and computer service activities	1,268.0	0.001	1	0.001	
a88	63	Information service activities	51,619.0	1	1	1	0.08
a732	6391Z	News agency activities	4,430.0	0.08	1	0.08	
a88	73	Advertising and market research	111,772.0	1	1	1	0.84
a732	7311Z	Advertising agencies	70,798.0	0.63	1	0.63	
a732	7312Z	Media representation	23,089.0	0.21	1	0.21	
a88	74	Other professional, scientific and technical activities	29,644.0	1	1	1	0.5
a732	7410Z	Specialized design activities	6,569.0	0.22	1	0.22	
a732	7420Z	Photographic activities	5,942.0	0.2	1	0.2	
a732	7430Z	Translation and interpretation activities	2,359.0	0.08	1	0.08	
a88	90	Creative, arts and entertainment activities	22,309.0	1	1	1	1

Source: National accounts and calculations from value-added coefficients

Table 2.4.j. Compounds coefficients for employment: Interdependent CIs

LEVEL	Sector	Activity	ETP Employment	sec/ br %	C/right%	Product	Sum
a88	17	Manufacture of paper and paper products	62,771.0				0.125
a732	1712Z	Manufacture of paper and paperboard	15,942.0	0.25	0.5	0.125	
a88	26	Manufacture of computer, electronic and optical products	128,924.0				0.5
a732	2611Z	Manufacture of electronic components	24,452.0	0.19	0.8	0.152	
a732	2612Z	Manufacture of loaded electronic boards	21,040.0	0.17	0.8	0.136	
a732	2620Z	Manufacture of computers and peripheral equipment	3,102.0	0.02	0.8	0.016	
a732	2630Z	Manufacture of communication equipment	22,399.0	0.19	0.9	0.17	
a732	2640Z	Manufacture of consumer electronics	1,272.0	0.01	0.5	0.005	
a732	2670Z	Manufacture of optical instruments and photographic equipment	2,936.0	0.02	0.8	0.016	
a732	2680Z	Manufacture of magnetic and optical media	86.0	0.001	0.8	0.0008	
a88	28	Manufacture of machinery and equipment n.e.c.	165,422.0				0.001
a732	2899A	Manufacture of printing machinery	1,917.0	0.002	0.5	0.001	
a88	32	Other manufacturing	62,440.0				0.02
a732	3220Z	Manufacture of musical instruments	1,389.0	0.022	0.9	0.02	
a88	47	Retail trade, except of motor vehicles and motorcycles	1,345,136.0				0.001
a732	4743Z	Retail sale of audio and video equipment in specialized stores	3,626.0	0.002	0.3	0.0006	
a732	4763Z	Retail sale of music and video recordings in specialized stores	S	0.002	0.3	0.0006	
a88	77	Rental and leasing activities	67,166.0				0.02
a732	7722Z	Renting of video tapes and disks	S	0.022	0.9	0.02	
a88	95	Repair of computers and personal and household goods	42,469.0				0.07
a732	9511Z	Repair of computers and peripheral equipment	19,917.0	0.47	0.1	0.047	
a732	9512Z	Repair of communication equipment	6,383.0	0.15	0.1	0.015	
a732	9521Z	Repair of consumer electronics	3,364.0	0.08	0.5	0.04	

Source: National accounts and calculations from value-added coefficients

Table 2.4.k. Aggregate coefficients for employment: Partial CIs

LEVEL	Sector	Activity	ETP employment	Sec/br %	CR Coef. %	Sum	
a88	13	Manufacture of textiles	42,478.0				**0.145**
a732	1392Z	Manufacture of made-up textile articles, except apparel	12,151.0	0.29	**0.5**	0.145	
a88	14	Manufacture of wearing apparel	39,706.0				**0.54**
a732	1411Z	Manufacture of leather clothes	559.0	0.01	**0.6**	0.006	
a732	1412Z	Manufacture of workwear	1,822.0	0.05	**0.6**	0.030	
a732	1413Z	Manufacture of other outerwear	17,160.0	0.43	**0.6**	0.30	

Table 2.4.k. Aggregate coefficients for employment: Partial CIs (continued)

a732	1414Z	Manufacture of underwear	8,800.0	0.22	**0.6**	0.13	
a732	1420Z	Manufacture of articles of fur	261.0	0.005	**0.6**	0.003	
a732	1431Z	Manufacture of knitted and crocheted hosiery	4,154.0	0.12	**0.6**	0.07	
a88	15	Manufacture of leather and related products	22,188.0				**0.77**
a732	1512Z	Manufacture of luggage, handbags and the like, saddlery and harness	14,253.0	0.63	**0.9**	0.57	
a732	1520Z	Manufacture of footwear	6,354.0	0.3	**0.6**	0.18	
a88	16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	61,314.0				**0.21**
a732	1621Z	Manufacture of veneer sheets and wood-based panels	6,219.0	0.1	**0.3**	0.03	
a732	1622Z	Manufacture of assembled parquet floors	1,147.0	0.03	**0.3**	0.009	
a732	1623Z	Manufacture of other builders' carpentry and joinery	20,001.0	0.32	**0.3**	0.096	
a732	1624Z	Manufacture of wooden containers	12,087.0	0.19	**0.3**	0.057	
a732	1629Z	Manufacture of other products of wood; manufacture of articles of cork, straw and plaiting materials	4,943.0	0.07	**0.3**	0.021	
a88	17	Manufacture of paper and paper products	62,771.0				**0.11**
a732	1711Z	Manufacture of pulp	1,014.0	0.016	**0.5**	0.008	
a732	1722Z	Manufacture of household and sanitary goods and of toilet requisites	7,096.0	0.12	**0.5**	0.06	
a732	1723Z	Manufacture of paper stationery	4,638.0	0.07	**0.5**	0.035	
a732	1724Z	Manufacture of wallpaper	169.0	0.003	**0.5**	0.0015	
a732	1729Z	Manufacture of other articles of paper and paperboard	6,804.0	0.011	**0.5**	0.0055	
a88	18	Printing and reproduction of recorded media	65,525.0				**0.03**
a732	1814Z	Binding and related services	4,099.0	0.06	**0.5**	0.03	
a88	23	Manufacture of other non-metallic mineral products	110,144.0				**0.093**
a732	2319Z	Manufacture and processing of other glass, including technical glassware	2,489.0	0.023	**0.5**	0.012	
a732	2341Z	Manufacture of ceramic household and ornamental articles	3,212.0	0.029	**0.5**	0.015	
a732	2349Z	Manufacture of other ceramic products	S	0.02	**0.5**	0.01	
a732	2370Z	Cutting, shaping and finishing of stone	7,420.0	0.07	**0.8**	0.056	
a88	25.0	Manufacture of fabricated metal products, except machinery and equipment	292,768.0				**0.035**
a732	2599A	Manufacture of household fabricated metal articles	2,540.0	0.008	**0.8**	0.006	
a732	2599B	Manufacture of other fabricated metal articles	14,010.0	0.048	**0.6**	0.029	
a88	32	Other manufacturing	62,440.0				**0.014**
a732	3212Z	Manufacture of jewelry and related articles	5,264.0	0.016	**0.8**	0.013	
a732	3213Z	Manufacture of imitation jewelry and related articles	1,631.0	0.006	**0.6**	0.001	
a732	3240Z	Manufacture of games and toys	1,788.0	0.007	**0.8**	0.0035	

Table 2.4.k. Aggregate coefficients for employment: Partial CIs (continued)

a88	46	Wholesale trade, except of motor vehicles and motorcycles	927,783.0				**0.023**
a732	4624Z	Wholesale (intercompany trade) of hides, skins and leather	674.0	0.001	**0.6**	0.0005	
a732	4642Z	Wholesale (intercompany trade) of clothing and footwear	29,532.0	0.03	**0.6**	0.018	
a732	4648Z	Wholesale (intercompany trade) of watches and jewelry	3,664.0	0.01	**0.6**	0.006	
a88	47	Retail trade, except of motor vehicles and motorcycles	1,345,136.0				**0.028**
a732	4753Z	Retail sale of carpets, rugs, wall and floor coverings in specialized stores	4,559.0	0.003	**0.7**	0.0021	
a732	4765Z	Retail sale of games and toys in specialized stores	7,333.0	0.006	**0.7**	0.004	
a732	4771Z	Retail sale of clothing in specialized stores	S	0.005	**0.7**	0.003	
a615	4772	Retail sale of footwear and leather goods in specialized stores	29,561.0	0.021	**0.7**	0.015	
a732	4777Z	Retail sale of watches and jewelry in specialized stores	14,977.0	0.01	**0.4**	0.004	
a88	71	Architectural and engineering activities; technical testing and analysis	299,422.0				**0.62**
a732	7111Z	Architectural activities	32,311.0	0.11	**0.9**	0.099	
a732	7112B	Engineering, technical studies	194,631.0	0.65	**0.8**	0.52	
a88	91	Libraries, archives, museums and other cultural activities	4,346.0	1	**0.8**	0.8	**0.8**

Source: National accounts and calculations from value-added coefficients

Table 2.4.I. Aggregate coefficients for employment: Non-dedicated support CIs

LEVEL	Sector	Activity	ETP employment	sec/br %	C/R %	Product	Sum
a88	46		927,783.0				0.03
a732	4611Z	Agents involved in the sale of agricultural raw materials, live animals, textile raw materials and semi-finished goods	971.0	0.001	0.03	0.00003	
a615	4612	Agents involved in the sale of fuels, ores, metals and industrial chemicals	3,327.0	0.003	0.03	0.00009	
a732	4613Z	Agents involved in the sale of timber and building materials	3,390.0	0.003	0.03	0.00009	
a732	4614Z	Agents involved in the sale of machinery, industrial equipment, ships and aircraft	5,343.0	0.05	0.03	0.0015	
a732	4615Z	Agents involved in the sale of furniture, household goods, hardware and ironmongery	819.0	0.001	0.03	0.00003	
a732	4616Z	Agents involved in the sale of textiles, clothing, fur, footwear and leather goods	2,938.0	0.002	0.05	0.0001	
a615	4617	Agents involved in the sale of food, beverages and tobacco	20,355.0	0.021	0.2	0.0042	
a732	4618Z	Agents specialized in the sale of other particular products	14,467.0	0.015	0.03	0.00045	
a615	4619	Agents involved in the sale of a variety of goods	25,999.0	0.026	0.03	0.00078	
a272	462	Wholesale of agricultural raw materials and live animals	39,320.0	0.041	0.05	0.00205	
a272	463	Wholesale of food, beverages and tobacco	141,307.0	0.15	0.01	0.0015	
a272	464	Wholesale of household goods	211,687.0	0.23	0.03	0.0069	
a272	466	Wholesale of other machinery, equipment and supplies	185,052.0	0.2	0.05	0.01	
a272	467	Other specialized wholesale	197,848.0	0.21	0.05	0.0105	
a272	469	Non-specialized wholesale trade	33,365.0	0.036	0.05	0.0018	
a88	47	Retail trade, except of motor vehicles and motorcycles	1,345,136.0				0.15
a272	471	Retail sale in non-specialized stores	536,395.0	0.4	0.3	0.12	
a272	472	Retail sale of food, beverages and tobacco in specialized stores	61,691.0	0.045	0.1	0.0045	
a732	4751Z	Retail sale of textiles in specialized stores	4,379.0	0.003	0.3	0.0009	
a732	4752A	Retail sale of hardware, paints and glass in small stores (less than 400 m2)	19,573.0	0.015	0.3	0.0045	
a732	4752B	Retail sale of hardware, paints and glass in DIY superstores (400 m2 and more)	61,628.0	0.044	0.3	0.0132	
a732	4764Z	Retail sale of sporting equipment in specialized stores	34,785.0	0.026	0.3	0.0078	
a732	4778C	Other sundry specialized retail sale	22,548.0	0.016	0.1	0.0016	
a615	4779	Retail sale of second-hand goods in stores	6,886.0	0.005	0.1	0.0005	
a272	478	Retail sale via stalls and markets	11,619.0	0.008	0.1	0.0008	
a615	4791	Retail sale via mail order houses or via Internet	35,868.0	0.026	0.1	0.0026	
a615	4799	Other retail sale not in stores, stalls or markets	22,496.0	0.023	0.5	0.0115	
a88	49	Land transport and transport via pipelines	640,989.0				0.03
a732	4920Z	Freight rail transport	1,728.0	0.002	0.08	0.00016	
a732	4941A	Interurban freight transport by road	156,804.0	0.24	0.08	0.0192	
a732	4941B	Proximity freight transport by road	106,062.0	0.16	0.08	0.0128	
a88	51	Air transport	63,795.0	0.1	0.08	0.008	

Table 2.4.l. Aggregate coefficients for employment: Non-dedicated support CIs (continued)

a88	52	Warehousing and support activities for transportation	225,910.0				0.11
a732	5210B	Non-refrigerating warehousing and storage	46,610.0	0.2	0.08	0.016	
a732	5221Z	Service activities incidental to land transportation	24,667.0	0.11	0.08	0.0088	
a732	5222Z	Service activities incidental to water transportation	8,440.0	0.03	0.08	0.0024	
a732	5223Z	Service activities incidental to air transportation	22,012.0	0.1	0.08	0.008	
a615	5224	Cargo handling	13,537.0	0.08	0.08	0.0064	
a88	53	Postal and courier activities	220,701.0	1	0.08	0.08	0.08
a732	5320Z	Other postal and courier activities	3,929.0	0.02	0.08	0.0016	
a88	61	Telecommunications	156,373.0				0.07
a732	6110Z	Wired telecommunications activities	76,000.0	0.49	0.08	0.0392	
a732	6120Z	Wireless telecommunications activities	27,620.0	0.17	0.08	0.0136	
a732	6130Z	Satellite telecommunications activities	34,250.0	0.22	0.08	0.0176	
a732	6190Z	Other telecommunications activities	15,655.0	0.1	0.08	0.008	
a88	63	Information service activities	51,619.0				0.06
a732	6312Z	Web portals	3,846.0	0.074	0.8	0.0592	
a88	79	Travel agency, tour operator and other reservation service and related activities	33,439.0				0.65
a732	7911Z	Travel agency activities	20,906.0	0.62	0.8	0.496	
a732	7912Z	Tour operator activities	6,509.0	0.19	0.8	0.152	

Source: National accounts and calculations from value-added coefficients

Table 2.4.m. Aggregate coefficients for external trade: Core CIs

Sector of Activity	Activity	Export turnover	Arch coefficient sector branch	Copyright coefficient	Aggregate Coefficient	
18	Printing and reproduction of recorded media	589.6			1	0.085
1811Z	Printing of newspapers	1.0	0.0	1	0.002	
1813Z	Start-up activities	56.6	0.096	0.5	0.048	
1820Z	Reproduction of recorded media	45.1	0.07	0.5	0.035	
46	Wholesale trade, except of motor vehicles and motorcycles	106,520.3				0.1
4651Z	Wholesale (intercompany trade) of computers, computer peripheral equipment and software	7,877.7	0.074	1	0.074	
4652Z	Wholesale (intercompany trade) of electronic and telecommunications equipment and parts	2,663.5	0.025	1	0.025	
47	Retail trade, except of motor vehicles and motorcycles	7,415.0				0.03
4741Z	Retail sale of computers, peripheral units and software in specialized stores	132.9	0.017	1	0.017	
4761Z	Retail sale of books in specialized stores	56.7	0.008	1	0.008	
4762Z	Retail sale of newspapers and stationery in specialized stores	30.7	0.004	1	0.004	
4763Z	Retail sale of music and video recordings in specialized stores	2.1	0.001	1	0.001	

Table 2.4.m. Aggregate coefficients for external trade: Core CIs (continued)

58	Publishing activities	4,061.8			1	1
5811Z	Book publishing	436.1	0.11	1	0.11	
5812Z	Publishing of directories and mailing lists	16.2	0.001	1	0.001	
5813Z	Publishing of newspapers	158.6	0.04	1	0.04	
5814Z	Publishing of journals and periodicals	497.8	0.12	1	0.12	
5819Z	Other publishing activities	48.8	0.003	1	0.003	
5821Z	Publishing of computer games	667.9	0.16	1	0.16	
5829	Other software publishing	2,236.5	0.55	1	0.55	
59	Motion picture, video and television program production, sound recording and music publishing activities	1,120.				1
5911	Motion picture, video and television program production activities	399.8	0.35	1	0.35	
5912Z	Motion picture, video and television program distribution activities	178.5	0.16	1	0.16	
5913	Motion picture, video and television program distribution activities	341.8	0.3	1	0.3	
5920Z	Sound recording and music publishing activities	200.0	0.18	1	0.18	
60	Programming and broadcasting activities	568.3				0.972
6010Z	Radio broadcasting	14.7	0.025	1	0.025	
6020	Television programming and broadcasting activities	553.6	0.97	1	0.97	
62	Computer programming, consultancy and related activities	6,233.4				0.75
6201Z	Computer programming activities	1,851.1	0.29	0.8	0.232	
6202A	Hardware and software consultancy	2,519.8	0.4	0.8	0.32	
6203Z	Computer facilities management activities	1,293.9	0.2	1	0.2	
6209Z	Other information technology and computer service activities	32.2	0.001	1	0.001	
63	Information service activities	832.7	1	1	1	0.3
6391Z	News agency activities	252.0	0.3	1	0.3	
73	Advertising and market research	2,271.4	1	1	1	0.71
7311Z	Advertising agencies	970.5	0.43	1	0.43	
7312Z	Media representation	633.8	0.28	1	0.28	
74	Other professional, scientific and technical activities	760.8	1	1	1	0.55
7410Z	Specialized design activities	277.4	0.36	1	0.36	
7420Z	Photographic activities	55.8	0.07	1	0.07	
7430Z	Translation and interpretation activities	92.3	0.12	1	0.12	
90	Creative, arts and entertainment activities	318.3	1	1	1	1

Table 2.4.n. Aggregate coefficients for external trade: Interdependent CIs

LEVEL	Sector of activity	Activity	Export turnover	Sec/br. %	CI coeff.	Product	CI/br. coeff.
a88	17	Manufacture of paper and paper products	5,941.0			1	0.33
a732	1712Z	Manufacture of paper and paperboard	3,961.6	0.66	0.5	0.33	
a88	26	Manufacture of computer, electronic and optical products	17,853.9				0.42
a732	2611Z	Manufacture of electronic components	4,343.9	0.24	0.8	0.192	
a732	2612Z	Manufacture of loaded electronic boards	1,913.2	0.11	0.8	0.088	
a732	2620Z	Manufacture of computers and peripheral equipment	747.2	0.041	0.8	0.0328	
a732	2630Z	Manufacture of communication equipment	3,541.5	0.2	1	0.2	
a732	2640Z	Manufacture of consumer electronics	128.6	0.007	0.5	0.0035	
a732	2670Z	Manufacture of optical instruments and photographic equipment	156.4	0.008	0.8	0.0064	
a732	2680Z	Manufacture of magnetic and optical media	8.5	0.001	0.8	0.0008	
a88	28	Manufacture of machinery and equipment n.e.c.	23,440.2				0.07
a732	2899A	Manufacture of printing machinery	333.0	0.14	0.5	0.07	
a88	32	Other manufacturing	4,547.5				0.026
a732	3220Z	Manufacture of musical instruments	121.3	0.026	1	0.026	
a88	47	Retail trade, except of motor vehicles and motorcycles	7,415.0				0.001
a732	4743Z	Retail sale of audio and video equipment in specialized stores	14.6	0.002	0.3	0.0006	
a732	4763Z	Retail sale of music and video recordings in specialized stores	2.1	0.001	0.3	0.0003	
a88	77	Rental and leasing activities	2,940.0				0.034
a732	7722Z	Renting of video tapes and disks	100.0	0.034	1	0.034	
a88	95	Repair of computers and personal and household goods	331.8				0.09
a732	9511Z	Repair of computers and peripheral equipment	184.7	0.559	0.1	0.0559	
a732	9512Z	Repair of communication equipment	103.0	0.31	0.1	0.031	
a732	9521Z	Repair of consumer electronics	4.7	0.014	0.5	0.007	

Table 2.4.o. Aggregate coefficients for external trade: Partial CIs

LEVEL	Sector	Activity	Export turnover	Sec/ br. %	C/R coeff.	Product	Final coeff.
a88	13	Manufacture of textiles	2,874.8	1.0		0	0.060
a732	1392Z	Manufacture of made-up textile articles, except apparel	333.7	0.12	0.5	0.06	
a88	14	Manufacture of wearing apparel	1,951.1	1.0		0	0.670
a732	1411Z	Manufacture of leather clothes	17.1	0.008	0.6	0.0048	
a732	1412Z	Manufacture of workwear	58.1	0.029	0.6	0.0174	
a732	1413Z	Manufacture of other outerwear	1,034.0	0.530	0.6	0.318	
a732	1414Z	Manufacture of underwear	444.9	0.230	0.6	0.138	
a732	1420Z	Manufacture of articles of fur	23.4	0.017	0.6	0.0102	
a732	1431Z	Manufacture of knitted and crocheted hosiery	113.7	0.06	0.6	0.0348	
a88	15	Manufacture of leather and related products	1,593.0				0.774
a732	1512Z	Manufacture of luggage, handbags and the like, saddlery and harness	1,148.8	0.72	0.9	0.648	
a732	1520Z	Manufacture of footwear	337.8	0.21	0.6	0.126	
a88	16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	1,631.4				0.240
a732	1621Z	Manufacture of veneer sheets and wood-based panels	618.6	0.38	0.3	0.114	
a732	1622Z	Manufacture of assembled parquet floors	35.3	0.02	0.3	0.0063	
a732	1623Z	Manufacture of other builders' carpentry and joinery	80.9	0.05	0.3	0.015	
a732	1624Z	Manufacture of wooden containers	397.0	0.24	0.3	0.072	
a732	1629Z	Manufacture of other products of wood; manufacture of articles of cork, straw and plaiting materials	117.7	0.07	0.5	0.035	
a88	17	Manufacture of paper and paper products	5,941.0			0	0.110
a732	1711Z	Manufacture of pulp	290.7	0.05	0.5	0.025	
a732	1722Z	Manufacture of household and sanitary goods and of toilet requisites	588.8	0.10	0.5	0.05	
a732	1723Z	Manufacture of paper stationery	135.9	0.022	0.5	0.011	
a732	1724Z	Manufacture of wallpaper	10.6	0.001	0.5	0.0005	
a732	1729Z	Manufacture of other articles of paper and paperboard	174.3	0.03	0.1	0.0029	
a88	18	Printing and reproduction of recorded media	589.6				0.026
a732	1814Z	Binding and related services	31.9	0.05	0.5	0.026	
a88	23	Manufacture of other non-metallic mineral products	4,942.5				0.05
a732	2319Z	Manufacture and processing of other glass, including technical glassware	188.3	0.038	0.5	0.019	
a272	2341Z	Manufacture of other porcelain and ceramic products	270.9	0.054	0.5	0.027	
a732	2349Z	Manufacture of other ceramic products	1.0	0.001	0.5	0.0005	
a732	2370Z	Cutting, shaping and finishing of stone	39.4	0.008	0.8	0.0064	
a88	25	Manufacture of fabricated metal products, except machinery and equipment	11,075.7	1		0	0.060
a732	2599A	Manufacture of household fabricated metal articles	176.1	0.015	0.8	0.012	
a732	2599B	Manufacture of other fabricated metal articles	828.6	0.074	0.6	0.0444	
a88	32	Other manufacturing	4,547.5			0	0.140

Table 2.4.o. Aggregate coefficients for external trade: Partial CIs (continued)

a732	3212Z	Manufacture of jewelry and related articles	626.6	0.137	0.8	0.1096	
a732	3213Z	Manufacture of imitation jewelry and related articles	63.9	0.014	0.6	0.0084	
a732	3240Z	Manufacture of games and toys	120.4	0.028	0.8	0.0224	
a88	46	Wholesale trade, except of motor vehicles and motorcycles	106,520.3				0.025
a732	4624Z	Wholesale (intercompany trade) of hides, skins and leather	359.5	0.004	0.5	0.002	
a732	4642Z	Wholesale (intercompany trade) of clothing and footwear	4,891.8	0.04	0.5	0.02	
a732	4648Z	Wholesale (intercompany trade) of watches and jewelry	775.9	0.007	0.5	0.0035	
a88	47	Retail trade, except of motor vehicles and motorcycles	7,415.0			0	0.228
a732	4753Z	Retail sale of carpets, rugs, wall and floor coverings in specialized stores	3.2	0.001	0.6	0.0006	
a732	4765Z	Retail sale of games and toys in specialized stores	13.2	0.001	0.6	0.0006	
a615	4771	Retail sale of clothing in specialized stores	1,534.7	0.21	0.6	0.126	
a615	4772	Retail sale of footwear and leather goods in specialized stores	670.5	0.09	0.6	0.054	
a615	4777	Retail sale of watches and jewelry in specialized stores	584.0	0.079	0.6	0.0474	
a88	71	Architectural and engineering activities; technical testing and analysis	9,156.5	1		0	0.941
a732	7111Z	Architectural activities	281.6	0.03	0.9	0.027	
a732	7112B	Engineering, technical studies	8,508.9	0.93	0.8	0.744	
a88	91	Libraries, archives, museums and other cultural activities	S	1	0.8	0.8	0.800

Table 2.4.p. Compound coefficients for external trade: Non-dedicated support CIs

LEVEL	Sector	Activity	Export turnover	Sec./ br. %	CR coeff.		Branch coeff.
a88	46	Wholesale trade, except of motor vehicles and motorcycles	106,520.3				0.2
a732	4611Z	Agents involved in the sale of agricultural raw materials, live animals, textile raw materials and semi-finished goods	443.1	0.001	0.1	0.0001	
a615	4612	Agents involved in the sale of fuels, ores, metals and industrial chemicals	2,475.5	0.023	0.1	0.0023	
a732	4613Z	Agents involved in the sale of timber and building materials	117.6	0.001	0.1	0.0001	
a732	4614Z	Agents involved in the sale of machinery, industrial equipment, ships and aircraft	1,672.1	0.015	0.3	0.0045	
a732	4615Z	Agents involved in the sale of furniture, household goods, hardware and ironmongery	30.9	0.001	0.5	0.0005	
a732	4616Z	Agents involved in the sale of textiles, clothing, fur, footwear and leather goods	338.8	0.001	0.8	0.0008	
a615	4617	Agents involved in the sale of food, beverages and tobacco	1,557.6	0.014	0.1	0.0014	
a732	4618Z	Agents specialized in the sale of other particular products	576.5	0.001	0.1	0.0001	
a615	4619	Agents involved in the sale of a variety of goods	1,566.5	0.014	0.1	0.0014	
a272	462	Wholesale of agricultural raw materials and live animals	9,212.6	0.086	0.1	0.0086	
a272	463	Wholesale of food, beverages and tobacco	18,448.7	0.173	0.1	0.0173	

Table 2.4.p. Compound coefficients for external trade: Non-dedicated support CIs (continued)

a272	464	Wholesale of household goods	26,235.6	0.247	0.1	0.0247	
a272	466	Wholesale of other machinery, equipment and supplies	14,621.7	0.137	0.5	0.0685	
a272	467	Other specialized wholesale	14,632.8	0.137	0.5	0.0685	
a272	469	Non-specialized wholesale trade	4,049.1	0.038	0.5	0.019	
a88	47	Retail trade, except of motor vehicles and motorcycles	7,415.0				0.027
a272	471	Retail sale in non-specialized stores	751.3	0.101	0.1	0.0101	
a272	472	Retail sale of food, beverages and tobacco in specialized stores	353.9	0.047	0.1	0.0047	
a732	4751Z	Retail sale of textiles in specialized stores	42.7	0.005	0.5	0.0025	
a732	4752A	Retail sale of hardware, paints and glass in small stores (less than 400 m2)	34.0	0.003	0.5	0.0015	
a732	4764Z	Retail sale of sporting equipment in specialized stores	204.5	0.021	0.5	0.0105	
a732	4778C	Other sundry specialized retail sale	253.3	0.024	0.1	0.0024	
a615	4779	Retail sale of second-hand goods in stores	297.4	0.04	0.1	0.004	
a732	4781Z	Retail sale via stalls and markets of food, beverages and tobacco products	2.3	0.001	0.1	0.0001	
a732	4782Z	Retail sale via stalls and markets of textiles, clothing and footwear	1.0	0.001	0.5	0.0005	
a732	4789Z	Retail sale via stalls and markets of other goods	139.5	0.019	0.1	0.0019	
a272	479	Retail trade not in stores, stalls or markets	1,096.0	0.147	0.1	0.0147	
a88	49	Land transport and transport via pipelines	3,234.6				0.081
a732	4920Z	Freight rail transport	98.4	0.025	0.1	0.0025	
a732	4941A	Interurban freight transport by road	2,244.8	0.69	0.1	0.069	
a732	4941B	Proximity freight transport by road	396.4	0.12	0.1	0.012	
a88	51	Air transport	15,257.7	1	0.1	0.1	0.1
a88	52	Warehousing and support activities for transportation	10,556.3	1	1	1	0.025
a732	5210B	Non-refrigerating warehousing and storage	327.1	0.03	0.1	0.003	
a732	5221Z	Service activities incidental to land transportation	126.8	0.012	0.1	0.0012	
a732	5222Z	Service activities incidental to water transportation	260.0	0.246	0.1	0.0246	
a732	5223Z	Service activities incidental to air transportation	529.4	0.05	0.1	0.005	
a615	5224	Cargo handling	460.2	0.043	0.1	0.0043	
a88	53	Postal and courier activities	494.9				0.009
a732	5320Z	Other postal and courier activities	45.6	0.09	0.1	0.009	
a88	61	Telecommunications	3,221.2				0.093
a732	6110Z	Wired telecommunications activities	1,258.2	0.39	0.1	0.039	
a732	6120Z	Wireless telecommunications activities	220.3	0.07	0.1	0.007	
a732	6130Z	Satellite telecommunications activities	1,330.5	0.41	0.1	0.041	
a732	6190Z	Other telecommunications activities	412.1	0.12	0.1	0.012	
a88	63	Information service activities	832.7				0.052
a732	6312Z	Web portals	44.2	0.052	0.1	0.0052	
a88	79	Travel agency, tour operator and other reservation service and related activities	4,828.9				0.91
a732	7911Z	Travel agency activities	2,270.0	0.47	0.1	0.047	
a732	7912Z	Tour operator activities	2,160.9	0.44	0.1	0.044	

Table 3.1.b.1. Value added per branch: Core CIs

A88.18	Printing and reproduction of recorded media
A88.46	Wholesale trade, excluding automobiles and motorcycles
A88.47	Retail Trade, excluding automobiles and motorcycles
A88.58	Publishing activities
A88.59	Motion picture, video and television program production, sound recording and music publishing activities
A88.60	Programming and broadcasting activities
A88.62	Computer programming, consultancy and related activities
A88.63	Information service activities
A88.74	Other professional, scientific and technical activities
	Advertising and market research
A88.90	Creative, arts and entertainment activities
TOTAL	**Total of branches**

Coeff.	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
0.140	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.5
0.040	2.5	2.7	3.0	3.0	3.2	3.2	3.2	3.3	3.4	3.7	3.5	3.7	4.0
0.030	1.7	1.7	1.8	1.9	2.0	2.1	2.1	2.1	2.2	2.3	2.3	2.3	2.3
0.880	7.9	8.3	8.6	8.7	8.6	8.9	9.0	9.4	9.6	9.7	9.1	9.4	9.5
0.910	4.5	4.9	5.1	5.2	5.7	6.0	6.0	6.1	5.8	5.7	5.8	6.0	6.1
1.000	1.9	2.0	2.1	2.1	2.5	2.6	2.6	2.6	2.6	2.7	2.8	2.8	2.6
0.760	17.4	18.9	20.2	20.4	20.4	21.3	21.6	23.6	25.1	26.1	24.9	26.0	26.4
0.150	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7
0.5	1.31	1.41	1.55	1.69	1.72	1.81	1.90	2.02	2.16	2.11	1.79	1.80	1.89
0.600	8.2	9.3	9.9	10.2	10.9	11.2	12.2	14.0	15.0	16.3	14.9	14.7	15.6
1.000	6.3	7.3	7.3	7.2	7.2	7.3	8.1	8.4	9.0	9.1	8.6	8.5	8.4
	53.0	57.7	60.9	61.8	63.5	65.7	68.1	72.8	76.2	78.9	74.9	76.4	78.1
	1,219.1	1,289.1	1,343.1	1,387.1	1,428.0	1,485.7	1,539.9	1,606.3	1,689.8	1,735.1	1,701.2	1,741.0	1,793.8

Source: National accounts with application of the conversion coefficients, 1999-2011

Table 3.1.b.2. **Table 3.1.b.2: Value added per branch: Interdependent CIs**

A88.17	Manufacture of paper and paper products
A38 26	Manufacture of computer, electronic and optical products
A38 28	Manufacture of machinery and equipment n.e.c.
A88.32	Other manufacturing
A88.47	Retail Trade, except of motor vehicles and motorcycles
A88.77	Rental and leasing activities
A88.95	Repairs
	Total Interdependent CIs
TOTAL	**Total for branches**

Coeff.	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
0.125	0.63	0.69	0.74	0.71	0.68	0.67	0.63	0.58	0.60	0.57	0.54	0.54	0.57
0.4100	4.05	4.78	4.59	4.54	4.14	4.23	3.88	3.79	3.80	3.43	2.81	2.44	2.11
0.004	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.05	0.05
0.020	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
0.010	0.56	0.57	0.61	0.64	0.67	0.69	0.69	0.70	0.73	0.76	0.77	0.75	0.76
0.2	4.77	5.36	5.44	5.35	5.37	5.29	5.56	6.01	6.42	6.64	6.30	6.57	6.98
0.07	0.33	0.35	0.36	0.37	0.37	0.38	0.38	0.40	0.42	0.43	0.39	0.38	0.39
	10.5	11.9	11.9	11.7	11.4	11.4	11.3	11.6	12.1	12.0	10.9	10.8	11.0
	1,219.1	1,289.1	1,343.1	1,387.1	1,428.0	1,485.7	1,539.9	1,606.3	1,689.8	1,735.1	1,701.2	1,741.0	

Source: National accounts with application of the conversion coefficients, 1999-2011

Table 3.1.b.3. Value added per branch: Partial CIs

A88.13	Manufacture of textiles
A88.14	Manufacture of wearing apparel
A88.15	Manufacture of leather and related products
A88.16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
A88.17	Manufacture of paper and paper products
A88.18	Printing and reproduction of recorded media
A88.23	Manufacture of other non-metallic mineral products
A88.25	Manufacture of fabricated metal products, except machinery and equipment
A88.32	Other manufacturing
A88.46	Wholesale trade, excluding automobiles and motorcycles
A88.47	Retail Trade, except of motor vehicles and motorcycles
A88.71	Architectural and engineering activities; technical testing and analysis
A88.91	Libraries, archives, museums and other cultural activities
	Total Partial CIs
TOTAL	**Total for branches**

1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
0.53	0.51	0.50	0.46	0.45	0.39	0.38	0.35	0.36	0.33	0.28	0.28	0.28
3.23	3.06	3.06	3.14	3.08	3.19	2.74	2.55	2.55	2.41	1.99	1.72	1.52
1.38	1.32	1.41	1.38	1.32	1.08	1.08	1.09	1.21	1.23	1.18	1.24	1.40
0.68	0.70	0.69	0.71	0.76	0.67	0.63	0.65	0.72	0.75	0.68	0.64	0.68
0.86	0.93	1.01	0.97	0.92	0.91	0.85	0.79	0.82	0.78	0.73	0.73	0.77
0.26	0.26	0.26	0.26	0.25	0.26	0.26	0.25	0.24	0.24	0.21	0.20	0.19
0.66	0.67	0.69	0.70	0.69	0.67	0.69	0.71	0.78	0.75	0.65	0.60	0.61
0.19	0.21	0.21	0.21	0.20	0.21	0.21	0.22	0.23	0.22	0.21	0.20	0.21
1.72	1.78	1.94	1.86	1.85	1.87	1.84	1.86	1.90	1.92	1.86	1.88	1.94
2.86	3.09	3.40	3.39	3.63	3.62	3.66	3.72	3.84	4.16	3.90	4.21	4.51
7.25	7.44	7.92	8.38	8.72	9.00	8.99	9.09	9.44	9.83	10.04	9.79	9.94
9.49	10.65	11.36	11.70	12.57	12.86	14.00	16.11	17.28	18.78	17.10	16.92	17.97
1.17	1.25	1.34	1.48	1.53	1.60	1.67	1.75	1.93	2.06	2.15	2.34	2.51
30.3	31.9	33.8	34.6	36.0	36.3	37.0	39.1	41.3	43.5	41.0	40.8	42.5
1,219.1	1,289.1	1,343.1	1,387.1	1,428.0	1,485.7	1,539.9	1,606.3	1,689.8	1,735.1	1,701.2	1,741.0	1,793.8

Source: National accounts with application of the conversion coefficients, 1999-2011

Table 3.1.b.4. Value added per branch: Non-dedicated support CIs

A88.46	Wholesale trade, excluding automobiles and motorcycles
A88.47	Retail Trade, except of motor vehicles and motorcycles
A88.49	Land transport and transport via pipelines
A88.52	Warehousing and support activities for transportation
A88.53	Postal and courier activities
A38.JB	Telecommunications
A88.63	Information service activities
A88.79	Travel agency, tour operator and other reservation service and related activities
TOTAL	**Total for branches**
	GDP
	Percentage value of non-dedicated support CIs in the GDP

Coeff.	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
0.030	1.9	2.1	2.3	2.3	2.4	2.4	2.4	2.5	2.6	2.8	2.6	2.8	3.0
0.10	5.6	5.7	6.1	6.4	6.7	6.9	6.9	7.0	7.3	7.6	7.7	7.5	7.6
0.04	1.1	1.1	1.2	1.3	1.3	1.3	1.4	1.4	1.6	1.6	1.6	1.6	1.6
0.11	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	3.0	3.0	3.0	3.1
0.01	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0.08	1.6	1.5	1.6	1.9	2.0	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.0
0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.66	1.2	1.2	1.2	1.4	1.4	1.4	1.4	1.4	1.4	1.6	1.5	1.6	1.7
	13.4	13.8	14.8	15.7	16.3	16.8	17.0	17.3	18.0	19.0	18.8	18.9	19.2
	1,219.1	1,289.1	1,343.1	1,387.1	1,428.0	1,485.7	1,539.9	1,606.3	1,689.8	1,735.1	1,701.2	1,741.0	1,793.8
	1.09	1.07	1.10	1.13	1.12	1.13	1.10	1.07	1.06	1.09	1.10	1.1	1.09

Source: National accounts with application of the conversion coefficients, 1999-2011

Table 3.5.f. **Value added per branch: Total CIs**

A88.47	Retail trade, excluding automobiles and motorcycles
A88.49	Land transport and transport via pipelines
A88.52	Warehousing and support activities for transportation
A88.53	Postal and courier activities
A88.58	Publishing activities
A88.59	Motion picture, video and television program production, sound recording and music publishing activities
A88.60	Programming and broadcasting activities
A38 61	Telecommunications
A88.62	Computer programming, consultancy and related activities
A88.63	Information service activities
A88.71	Architectural and engineering activities; technical testing and analysis
A88.73	Advertising and market research
A88.74	Other professional, scientific and technical activities
A88.77	Rental and leasing activities
A88.79	Travel agency, tour operator and other reservation service and related activities
A88.90	Creative, arts and entertainment activities
A88.91	Libraries, archives, museums and other cultural activities
A88.95	Repairs
TOTAL	Total of branches

Coeff.	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
0.14	0.55	0.53	0.52	0.48	0.46	0.41	0.39	0.37	0.38	0.35	0.29	0.29	0.29
0.87	3.23	3.06	3.06	3.14	3.08	3.19	2.74	2.55	2.55	2.41	1.99	1.72	1.52
0.94	1.38	1.32	1.41	1.38	1.32	1.08	1.08	1.09	1.21	1.23	1.18	1.24	1.40
0.20	0.68	0.70	0.69	0.71	0.76	0.67	0.63	0.65	0.72	0.75	0.68	0.64	0.68
0.5	2.63	2.85	3.09	2.96	2.82	2.78	2.60	2.41	2.51	2.38	2.24	2.24	2.36
0.2	1.03	1.03	1.03	1.03	1.01	1.02	1.03	1.01	0.96	0.94	0.86	0.81	0.75
0.1	0.73	0.74	0.77	0.77	0.77	0.74	0.77	0.79	0.87	0.83	0.72	0.67	0.68
0.01	0.19	0.21	0.21	0.21	0.20	0.21	0.21	0.22	0.23	0.22	0.21	0.20	0.21
0.41	4.05	4.78	4.59	4.54	4.14	4.23	3.88	3.79	3.80	3.43	2.81	2.44	2.11
0.08	0.94	0.96	1.01	0.95	0.94	0.97	0.97	1.01	1.06	1.07	0.87	0.91	0.92
0.45	1.49	1.52	1.62	1.60	1.58	1.58	1.57	1.51	1.46	1.34	1.33	1.29	1.27
0.45	1.80	1.86	2.03	1.95	1.94	1.96	1.93	1.95	1.99	2.01	1.95	1.97	2.03
0.25	15.89	17.14	18.90	18.81	20.18	20.10	20.31	20.67	21.31	23.12	21.68	23.42	25.08
0.200	11.15	11.45	12.19	12.90	13.42	13.84	13.84	13.99	14.53	15.13	15.45	15.07	15.29
0.04	1.06	1.13	1.24	1.27	1.28	1.32	1.40	1.44	1.56	1.60	1.57	1.57	1.61
0.18	3.28	3.45	3.55	3.75	3.87	4.08	4.20	4.35	4.65	4.91	4.97	4.97	5.06
0.0150	0.12	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.14	0.14	0.13	0.13	0.14
0.88	7.94	8.32	8.59	8.67	8.62	8.91	8.99	9.45	9.59	9.67	9.13	9.36	9.55
0.910	4.50	4.86	5.13	5.20	5.69	6.00	6.02	6.07	5.83	5.70	5.75	6.05	6.13
1.0	1.91	2.03	2.14	2.13	2.48	2.63	2.61	2.59	2.62	2.65	2.76	2.76	2.60
0.1	1.95	1.85	2.03	2.43	2.49	2.65	2.67	2.67	2.74	2.79	2.79	2.80	2.55
0.76	17.43	18.90	20.21	20.44	20.40	21.26	21.62	23.57	25.06	26.09	24.88	26.03	26.41
0.16	0.49	0.53	0.55	0.58	0.59	0.61	0.62	0.67	0.71	0.74	0.72	0.70	0.70
0.83	11.41	12.81	13.67	14.07	15.12	15.47	16.84	19.38	20.79	22.59	20.57	20.35	21.62
0.850	5.35	6.20	6.24	6.16	6.12	6.21	6.91	7.12	7.61	7.71	7.32	7.20	7.17
0.5	1.31	1.41	1.55	1.69	1.72	1.81	1.90	2.02	2.16	2.11	1.79	1.80	1.89
0.2	4.77	5.36	5.44	5.35	5.37	5.29	5.56	6.01	6.42	6.64	6.30	6.57	6.98
0.08	0.14	0.15	0.15	0.17	0.16	0.17	0.17	0.17	0.17	0.20	0.19	0.19	0.20
1.0	5.83	6.44	7.08	8.07	8.40	8.71	9.14	9.68	9.87	10.06	10.19	10.35	10.62
1.0	1.17	1.25	1.34	1.48	1.53	1.60	1.67	1.75	1.93	2.06	2.15	2.34	2.51
0.07	0.33	0.35	0.36	0.37	0.37	0.38	0.38	0.40	0.42	0.43	0.39	0.38	0.39
	114.7	123.3	130.5	133.4	137.0	140.0	142.8	149.5	155.9	161.3	153.8	156.5	160.7
	1,219.1	1,289.1	1,343.1	1,387.1	1,428.0	1,485.7	1,539.9	1,606.3	1,689.8	1,735.1	1,701.2	1,741.0	1,793.8
	9.35	9.54	9.67	9.58	9.59	9.42	9.22	9.33	9.23	9.20	8.99	8.96	8.92

Source: National accounts with application of the conversion coefficients, 1999-2011

Table 3.6.a. Employment per branch: Core CIs

A88.18	Printing and reproduction of recorded media
A88.46	Wholesale trade
A88.47	Retail trade
A88.58	Publishing activities
A88.59	Motion picture, video and television program production, sound recording and music publishing activities
A88.60	Programming and broadcasting activities
A88.62	Computer programming, consultancy and related activities
From 88 to 63	Information service activities
A88.73	Advertising and market research
A88.74	Other professional, scientific and technical activities
A88.90	Creative, arts and entertainment activities
	Total core CIs
	Total of branches
TOTAL	
	Thousands of people in "full-time equivalent"

Coeff.	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
0.420	48.5	48.9	49.3	47.7	46.2	44.8	43.6	42.6	41.1	39.5	37.3	35.1	33.5
0.020	20.6	20.9	21.5	22.6	23.1	23.7	23.5	23.0	23.1	23.5	23.1	22.8	22.9
0.040	64.9	66.4	68.0	69.4	71.3	71.2	71.5	71.5	73.0	73.0	72.5	73.3	74.3
0.99	120.2	127.8	133.9	130.9	126.5	125.9	122.8	124.1	126.3	128.1	123.1	120.1	120.4
0.93	45.4	48.3	48.6	50.1	50.2	50.4	50.7	51.4	53.3	54.2	54.7	54.7	54.7
1.0	20.1	23.5	23.6	25.0	25.2	25.4	25.6	26.2	27.0	28.2	28.0	27.8	28.6
0.67	169.0	188.2	204.6	201.3	193.6	196.5	194.0	205.0	213.1	223.2	223.1	228.7	236.0
0.08	4.2	4.6	5.0	5.1	5.1	5.1	5.1	5.3	5.5	5.8	5.4	5.2	5.1
0.84	125.5	134.1	130.3	114.0	111.7	118.5	129.9	124.1	122.6	125.5	124.2	123.5	125.6
0.50	27.4	28.9	30.4	31.7	31.7	32.0	33.2	34.0	33.4	33.2	29.5	28.8	29.9
1.0	156.8	168.4	182.7	202.5	209.6	211.0	210.5	219.3	222.3	221.8	224.5	227.1	224.8
	802.7	859.9	898.0	900.2	894.3	904.4	910.3	926.6	940.7	956.1	945.3	947.2	955.9
	23,431.1	24,068.2	24,517.0	24,720.4	24,758.9	24,802.4	24,971.9	25,257.1	25,595.8	25,685.2	25,289.6	25,282.2	25,468.1
					0.1							0.1	
	8.32	8.41	8.5	8.50	8.480	8.49	8.37	8.36	8.38	8.45	8.39	8.37	8.40

Source: National accounts with application of the conversion coefficients, 1999-2011

Table 3.7.b. Employment per branch: Interdependent CIs

A88.17	Manufacture of paper and paper products
A88.26	Manufacture of computer, electronic and optical products
A38.28	Manufacture of machinery and equipment n.e.c.
A88.31	Manufacture of furniture
A88.32	Other manufacturing
A88.47	Retail trade
A88.95	Repair of computers and personal and household goods
	Total intermediate CIs
	Total of branches

Coeff.	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
0.125	11.3	11.2	11.3	11.1	10.9	10.7	10.2	9.7	9.3	9.0	8.2	8.0	7.9
0.5	89.8	92.4	93.2	87.4	81.5	74.7	69.5	71.0	70.7	69.3	60.1	56.4	55.4
0.001	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
0.042	3.7	3.7	3.8	3.7	3.6	3.5	3.4	3.2	3.2	3.1	2.9	2.7	2.6
0.020	1.9	1.9	1.9	1.9	1.9	1.8	1.7	1.7	1.7	1.7	1.6	1.6	1.5
0.001	1.6	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9
0.07	5.5	5.8	6.0	6.0	5.9	6.0	5.9	6.0	6.0	6.0	6.5	6.4	6.5
	114.0	116.9	118.2	112.0	105.7	98.6	92.8	93.6	92.9	91.2	81.3	77.1	76.0
	23,431.1	24,068.2	24,517.0	24,720.4	24,758.9	24,802.4	24,971.9	25,257.1	25,595.8	25,685.2	25,289.6	25,282.2	25,468.1

Source: National accounts with application of the conversion coefficients, 1999-2011

Table 3.8.b. Employment by Industry: Partial CIs

A88.13	Manufacture of textiles
A88.14	Manufacture of wearing apparel
A88.15	Manufacture of leather and related products
A88.16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
A88.17	Manufacture of paper and paper products
A88.18	Printing and reproduction of recorded media
A88.23	Manufacture of other non-metallic mineral products
A88.25	Manufacture of fabricated metal products, except machinery and equipment
A88.31	Manufacture of furniture
A88.32	Other manufacturing
A88.46	Wholesale trade excluding automobiles
A88.47	Wholesale trade excluding automobiles
A88.71	Architectural and engineering activities; technical testing and analysis
A88.91	Libraries, archives, museums and other cultural activities
	Employment partial CIs
	Total for branches

Coeff.	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
0.145	15.8	15.4	15.1	14.1	13.0	11.6	10.8	9.8	9.2	8.6	7.6	7.1	6.8
0.76	104.2	90.9	84.5	80.1	73.2	64.3	57.6	50.7	48.4	45.1	39.1	37.0	35.7
0.660	0.7	27.1	26.3	25.0	23.4	21.1	19.3	18.7	18.4	18.0	16.2	15.8	16.0
0.210	16.6	16.6	16.6	16.6	16.7	16.4	15.7	15.7	15.7	15.7	15.1	14.6	14.4
0.110	10.0	9.9	10.0	9.8	9.6	9.4	9.0	8.5	8.2	8.0	7.2	7.1	7.0
0.030	3.5	3.5	3.5	3.4	3.3	3.2	3.1	3.0	2.9	2.8	2.7	2.5	2.4
0.073	9.9	9.9	9.9	9.7	9.5	9.3	9.1	8.7	8.7	8.7	7.9	7.6	7.5
0.100	39.6	40.7	41.3	40.6	39.7	38.5	37.8	37.9	37.9	37.7	37.0	35.1	35.0
0.022	1.9	1.9	2.0	1.9	1.9	1.8	1.8	1.7	1.7	1.6	1.5	1.4	1.4
0.022	2.1	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.7	1.7
0.002	2.1	2.1	2.2	2.3	2.3	2.4	2.3	2.3	2.3	2.4	2.3	2.3	2.3
0.029	47.1	48.1	49.3	50.3	51.7	51.6	51.8	51.9	52.9	52.9	52.6	53.1	53.8
0.61	156.1	168.3	176.9	179.9	187.9	196.4	198.0	214.7	224.6	232.6	226.1	227.0	235.6
0.80	21.3	22.5	24.0	25.8	26.4	26.2	26.1	26.7	29.5	30.4	30.6	33.4	35.7
	430.8	458.8	463.9	461.4	460.5	454.1	444.3	452.3	462.3	466.1	447.6	445.6	455.2
	23,431.1	24,068.2	24,517.0	24,720.4	24,758.9	24,802.4	24,971.9	25,257.1	25,595.8	25,685.2	25,289.6	25,282.2	25,468.1

Source: National accounts with application of the conversion coefficients, 1999-2011

Table 3.9.b. Employment per branch: Non-dedicated support CIs

A88.46	Wholesale trade excluding automobiles and motorcycles
A88.47	Retail trade excluding automobiles and motorcycles
A88.49	Land transport and transport via pipelines
A88.52	Warehousing and support activities for transportation
A88.53	Postal and courier activities
A38 61	Telecommunications
A88.63	Information service activities
A88.79	Travel agency, tour operator and other reservation service and related activities
	Employment non-dedicated support CIs
	Total for branches

Coeff.	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
0.003	3.1	3.1	3.2	3.4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.4	3.4
0.150	243.4	248.9	255.1	260.3	267.2	266.9	268.0	268.2	273.8	273.7	271.9	274.8	278.5
0.030	19.4	20.6	21.0	21.5	21.5	21.7	21.4	21.6	22.0	22.4	22.1	22.2	22.6
0.110	26.3	26.4	28.1	28.3	28.3	28.2	27.5	27.5	28.0	28.5	27.6	27.2	27.3
0.080	17.7	19.4	20.9	21.2	21.1	20.8	20.4	21.2	20.6	20.1	19.0	18.7	18.7
0.07	10.6	10.5	10.4	10.2	10.0	9.8	9.6	9.5	9.4	9.1	9.0	8.6	8.7
0.01	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.6
0.650	30.9	31.7	33.0	35.4	36.0	36.2	34.8	36.4	37.0	37.6	40.1	40.5	40.8
	352.0	361.2	372.3	380.8	388.2	387.7	385.8	388.6	394.9	395.5	393.8	396.1	400.7
	23,431.1	24,068.2	24,517.0	24,720.4	24,758.9	24,802.4	24,971.9	25,257.1	25,595.8	25,685.2	25,289.6	25,282.2	25,468.1

Source: National accounts with application of the conversion coefficients, 1999-2011

Table 3.20.a. Exports per branch: Core CIs

A88.18	Printing and reproduction of recorded media
A88.46	Wholesale trade excluding automobiles and motorcycles
A88.47	Retail trade excluding automobiles and motorcycles
A88.58	Publishing activities
A88.59	Motion picture, video and television program production, sound recording and music publishing activities
A88 60	Programming and broadcasting activities
A38 62	Computer programming, consultancy and related activities
A88.63	Information service activities
A88.73	Advertising and market research
A88.74	Other professional, scientific and technical activities
A88.90	Creative, arts and entertainment activities
	Total core CIs

Coeff.	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
0.09	0.00	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.000	0.004	0.006	0.007
0.10	0.50	0.573	0.509	0.444	0.485	0.764	0.776	0.706	2.500	0.848	0.908	1.193
0.03	0.15	0.153	0.150	0.156	0.168	0.198	0.204	0.204	1.035	0.207	0.222	0.243
1.00	2.25	2.204	2.125	2.048	2.138	2.176	2.126	2.138	2.500	1.896	2.018	2.085
1.00	1.47	1.386	1.483	1.552	1.688	1.551	1.191	1.161	1.774	1.143	1.151	1.192
0.97	0.29	0.291	0.291	0.291	0.388	0.388	0.388	0.437	0.146	0.485	0.485	0.485
0.75	0.66	0.936	0.949	0.835	0.894	1.028	1.171	1.045	0.823	0.884	0.918	1.045
0.3	0.17	0.170	0.170	0.170	0.204	0.204	0.204	0.204	0.102	0.204	0.204	0.204
0.71	0.65	0.691	0.653	0.626	0.744	0.858	0.687	0.525	0.503	0.447	0.503	0.528
0.55	0.03	0.019	0.019	0.019	0.017	0.020	0.020	0.019	0.001	0.009	0.010	0.010
1.00	0.86	0.755	0.694	0.709	0.749	0.803	1.001	0.952	0.972	0.926	0.671	1.272
	7.02	7.179	7.045	6.851	7.476	7.992	7.770	7.392	10.356	7.052	7.097	8.264

Source: National accounts with application of the conversion coefficients, 1999-2011

Table 3.20.b. Exports per branch: Interdependent CIs

A88.17	Manufacture of paper and paper products
A88 26	Manufacture of computer, electronic and optical products
From 38 to 28	Manufacture of machinery and equipment n.e.c.
A88.32	Other manufacturing
A88.47	Retail trade, except of motor vehicles and motorcycles
A88.77	Rental and leasing activities
A88.95	Repair of computers and personal and household goods

Coeff.	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
0.10	0.6701	0.6715	0.6609	0.649	0.6519	0.6534	0.668	0.7	0.7	0.6	0.6	0.7
0.42	16.9071	15.25062	13.45722	11.67264	12.41772	12.81042	13.44798	12.2	11.3	9.6	11.4	11.9
0.07	1.83862	1.90022	1.97267	1.95468	2.01404	2.12751	2.39736	2.5	2.6	2.0	2.2	2.5
0.03	0.164658	0.182598	0.18616	0.175916	0.190216	0.205426	0.219388	0.2	0.2	0.2	0.3	0.3
0.00	0.005	0.0051	0.005	0.0052	0.0056	0.0066	0.0068	0.0	0.0	0.0	0.0	0.0
0.03	0.099688	0.113934	0.136816	0.1445	0.156944	0.184042	0.182206	0.2	0.3	0.3	0.3	0.3
0.09	0.018	0.018	0.027	0.027	0.0324	0.036	0.036	0.0	0.0	0.0	0.0	0.0
	19.7	18.1	16.4	14.6	15.5	16.0	17.0	15.9	15.2	12.7	14.8	15.7

Source: National accounts and calculations from the conversion coefficients

Table 3.20.c. Exports per branch: Partial CIs

A88.13	Manufacture of textiles
A88.14	Manufacture of wearing apparel
A88.15	Manufacture of leather and related products
A88.16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
A88.17	Manufacture of paper and paper products
A88.18	Printing and reproduction of recorded media
A88.23	Manufacture of other non-metallic mineral products
A88.25	Manufacture of fabricated metal products, except machinery and equipment
A88.31	Manufacture of furniture
A88.32	Other manufacturing
A88.46	Wholesale trade, except of motor vehicles
A88.47	Retail trade, except of motor vehicles
A88.71	Architectural and engineering activities; technical testing and analysis
A88.91	Libraries, archives, museums and other cultural activities
	Exports partial CIs

Coeff.	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
0.09	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.3	0.4	0.4
0.86	5.0	5.4	5.6	5.4	5.5	5.8	6.3	6.8	6.7	6.2	6.5	6.8
0.93	2.8	3.1	3.1	3.1	3.3	3.6	4.0	4.2	4.3	4.1	4.9	5.9
0.30	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.5	0.5	0.6
0.10	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.7
0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.09	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5
0.09	0.8	0.8	0.8	0.8	0.9	0.9	0.9	1.1	1.1	0.9	1.0	1.0
0.17	1.0	1.2	1.2	1.1	1.2	1.3	1.4	1.5	1.5	1.5	1.7	1.9
0.03	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.3	0.3
0.38	1.9	1.9	1.9	2.0	2.1	2.5	2.6	2.6	2.6	2.6	2.8	3.1
0.77	3.5	3.9	3.8	4.0	3.8	3.7	3.8	3.7	4.3	4.1	4.2	4.1
0.16	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
	17.6	19.0	19.0	18.8	19.3	20.3	21.6	22.4	23.2	21.5	23.3	25.3

Source: National accounts and calculations from the conversion coefficients

Table 3.20.d. Exports per branch: Non-dedicated support CIs

A88.46	Wholesale trade, except of motor vehicles and motorcycles
A88.47	Retail trade, except of motor vehicles and motorcycles
A88.49	Land transport and transport via pipelines
A88.52	Warehousing and support activities for transportation
A88.53	Postal and courier activities
A38 61	Telecommunications
A88.63	Information service activities
A88.79	Travel agency, tour operator and other reservation service and related activities
	Exports Non-dedicated support CIs

Coeff.	2000	2001	2002	2003	2004	2005 I	2006	2007	2008	2009	2010	2011
0.02	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.3
0.08	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6
0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.03	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.08	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.73	2.7	2.8	2.7	3.0	3.1	3.1	3.2	3.3	3.5	3.4	3.5	3.6
	3.5	3.5	3.5	3.8	3.9	4.2	4.3	4.5	4.7	4.6	4.7	4.9

Source: National accounts and calculations from the conversion coefficients

Table 3.21.a. Export indices for core and total industries, 2000-2011

	Core	Inter.	Part.	Add.	Total CIs	Ind. core exp.	Ind. tot. exp.
2000	7.0	19	17.6	3.8	**47.4**	100	100
2001	7.2	18	19	3.9	**48.1**	103	102
2002	7.0	16	19	4	**46.0**	97	102
2003	6.8	14	18.8	4.1	**43.7**	99	99
2004	7.4	15	19.3	4.4	**46.1**	109	104
2005	8.0	16	20.3	4.5	**48.8**	107	109
2006	7.8	17	21.6	4.6	**51.0**	98	117
2007	7.8	16	22.4	4.6	**50.8**	95	122
2008	10.4	15	23.2	4.6	**53.2**	103	125
2009	7.0	12	21.5	4.6	**45.1**	93	106
2010	7.1	14	23.3	4.7	**49.1**	100	119
2011	8.3	15	25.3	4.9	**53.5**	117	133

Source: National accounts and calculations from the conversion coefficients

Table 3.21.b. **Export indices for interdependent and total industries, 2000-2011**

Year	Inter. exp.	Tot. exp.	% inter/tot. exp.	Ind. inter. exp.	Ind. tot. exp.
2000	19	414.8	0.05	100	100
2001	18	424.1	0.04	95	102
2002	16	424.4	0.04	89	102
2003	14	411.4	0.03	73	99
2004	15	432.8	0.03	78	104
2005	16	452.9	0.04	89	109
2006	17	485.9	0.03	89	117
2007	16	506.7	0.03	89	122
2008	15	521.0	0.03	78	125
2009	12	440.7	0.03	63	106
2010	14	494.5	0.03	73	119
2011	15	538.3	0.03	78	133

Table 3.21.c. **Export indices for partial and total industries, 2000-2011**

Year	Exp. part.	Exp. Total	% exp. part./exp. tot.	Ind. exp. part.	Ind exp. tot.
2000	7.0	414.8	4.8	100	100
2001	7.2	424.1	4.7	103	102
2002	7.0	424.4	4.7	97	102
2003	6.9	411.4	4.9	99	99
2004	7.5	432.8	4.6	109	104
2005	8.0	452.9	4.4	107	109
2006	7.80	485.9	4.1	98	117
2007	7.40	506.7	4.0	95	122
2008	7.60	521.0	3.9	103	125
2009	7.10	440.7	4.6	93	106
2010	7.10	494.5	4.1	100	119
2011	8.30	538.3	3.7	117	133

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