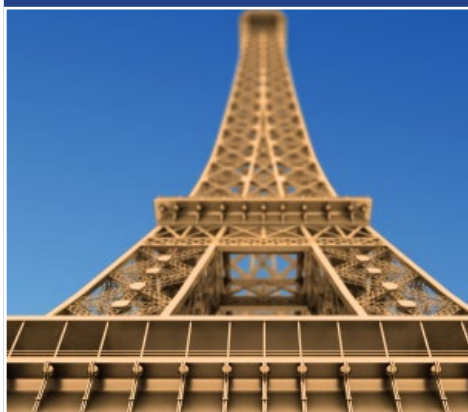


# National Studies on Assessing the Economic Contribution of the Copyright Industries



Creative Industries Series No. 9

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# The Economic Contribution of Copyright Industries in Ethiopia

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Wondwossen Belete<sup>1</sup>  
Seyoum Tadesse<sup>2</sup>

<sup>1</sup> The main author is a researcher and freelance consultant.

<sup>2</sup> Senior Statistician, Central Statistical Agency (CSA).

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## Acronyms

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AGOA	African Growth and Opportunity Act
BIRR	The unit of currency in Ethiopia
CSA	Central Statistical Agency
GDP	Gross Domestic Product
GVA	Gross Value Added
EIPO	Ethiopian Intellectual Property Office
ERCA	Ethiopian Revenues and Customs Authority
ESIC	Ethiopian Standard Industrial Classification
GTP	Growth and Transformation Plan
HCE	Household Consumption Expenditure
HS	Harmonized System
ICT	Information and Communication Technology
ISIC	International Standard Industrial Classification
MeTEC	Metal and Engineering Corporation
MOFED	Ministry of Finance and Economic Development
NBE	National Bank of Ethiopia
PASDEP	Plan for Accelerated and Sustainable Development to End Poverty
SDPRP	Sustainable Development and Poverty Reduction Program
WIPO	World Intellectual Property Organization

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## Summary

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Various national studies have shown the significant economic impact of creative industries in both developed and developing countries. The studies have revealed the considerable contribution of the industries to GDP and national employment. It has also become evident through the studies that these industries are among the most dynamic in the trading system. The activities of these industries, which include the creation, production, marketing, and distribution of products and services resulting from human creativity, deal with the interplay of various knowledge-based economic activities. The significance of copyright-related issues has become more apparent with the growing role of knowledge as the driver of productivity and economic growth.

The World Intellectual Property Organization (WIPO), at the request of the Ethiopian Intellectual Property Office (EIPO), commissioned this study on the contribution of the copyright industries to the Ethiopian economy. The objective of the study is to assess the impact of copyright industries on the Ethiopian economy by quantifying the contribution of these industries in terms of their value added to the country's GDP, as well as their contribution to employment and revenue generated from foreign trade. It is also aimed at generating research-based evidence and analysis to inform policymakers about the economic significance of the sector. It is expected that the results of the study will provide data on the actual economic contribution of creative activities, which can serve as the basis for adjusting policies and strategies aimed at promoting growth and development in the country's copyright sectors. The evidence produced by the study will also serve as an input to future studies on the determination of the optimal levels of protection standards given by copyright law and establish a robust level of copyright protection acceptable to the different stakeholders.

The study follows the methodology recommended by the 2003 World Intellectual Property Organization (WIPO) Guide on surveying the economic contribution of copyright industries. The guide categorizes copyright industries into core copyright industries, interdependent copyright industries, partial copyright industries and non-dedicated support industries, as a function of their dependency on copyright material. It suggests methods and procedures for quantifying their contribution in statistical terms.

Data for the study were mainly obtained from the Central Statistical Agency of Ethiopia (CSA), the Ministry of Finance and Economic Development (MoFED), the Ethiopian Revenues and Customs Authority (ERCA) and the National Bank of Ethiopia (NBE). The research team also used data contained in various government reports. Data reported by MoFED and CSA are used for the measurement of the value added by the copyright industries in Ethiopia. In this study gross value added (GVA) was used for analyzing the contribution of the copyright industries to GDP.

In 2012, the value added of the copyright industries in Ethiopia was 23,989,211,925 Birr. As a percentage of Gross Domestic Product (GDP) at constant prices, this amounted to 4.73 per cent. The copyright industries also provided jobs to 240,287 persons, which is 4.2 per cent of the urban population employed by the different economic sectors. With a 0.65 per cent share in exports and a 10.87 per cent share in imports, the copyright industries played an important role in Ethiopia's external trade. The total exports by the copyright industries amounted to 465,501,740 Birr, while the total imports amounted to 24,358,767,344 Birr worth of goods and services.

The labor productivity index for the copyright industries as a whole was 112.6. This index was the highest for the core copyright industries, with a ratio of 143. In the interdependent and partial industries the ratios were 109 and 130, respectively. The lowest labor productivity index was observed in the non-dedicated copyright industries with a ratio of 77. The small figure for the non-dedicated support industries is a result of the labor-intensive nature of wholesale and retail trade activities in the country observed in the study. The non-dedicated support industries accounted for 29.25 per cent of the labor force in the copyright industries, while their share in the GDP contribution of the copyright industries was only 20.05 per cent.

The contribution of the core copyright industries in 2012 was 9,945,308,947 Birr, which represented 1.96 per cent of the GDP. In 2012, the three largest sub-sectors—press and literature; radio and television; and music, theatrical production, and operas—accounted for 78.72 per cent of the total contribution of core copyright industries in terms of gross value added. Motion pictures and video contributed only 5.54 per cent to the total share of the core copyright industries in the reference year. The official data also revealed the current low level of development of Ethiopia's software industry. With 584,653,226 Birr value added in 2012, software and

databases accounted for only 5.88 per cent of the share of the core copyright industries. Out of this, software programming and consultancy accounted for 88,163,949 Birr, while the remaining 496,489,277 Birr is the contribution from database activities.

In the interdependent copyright industries, TV sets, radios, VCRs, CD players, DVD players, and other electronic equipment took the leading place with 57.48 per cent. Blank recording material (17.74 per cent), paper (15.70 per cent), computers and equipment (7.69 per cent), photographic and cinematographic instruments (0.98 per cent), and musical instruments (0.28 per cent) follow in the order of their contributions to the sector. The lowest contribution in the sector came from photocopiers, which accounted for only 0.13 per cent. The group of interdependent industries together contributed 1.39 per cent of the GDP. The wholesale and retail trade constitutes a significant share of the interdependent copyright industries.

The value added of the partial copyright industries was 2,172,916,485 Birr, representing 0.43 per cent of the country's gross value added in 2012. Apparel, textiles, and footwear accounted for 61.91 per cent of the sub-sector's contribution to value added. The second place in the partial copyright industries was taken by architecture, engineering, and surveying (22.16 per cent), followed by furniture (8.54 per cent). Interior design, with 0.03 per cent of the sector's contribution to value added, had the lowest share.

The last group of industries, non-dedicated support industries, includes general wholesale and retailing, general transportation, and telecommunication. These industries contributed 4,809,519,397 Birr, which was 0.95 per cent of the GDP. Out of the contribution of the non-dedicated support industries in Ethiopia, 78.25 per cent was accounted for by general wholesale and retail activities. General transportation contributed 11.64 per cent of the sub-sector's share, while the remaining 10.11 per cent was accounted for by telecommunications.

In terms of the contribution to employment, the core copyright industries, which employed 78,407 persons, have the highest share (32.63 per cent), followed by the interdependent copyright industries, which employed 72,725 (30.27 per cent) of the manpower in the sector. The partial copyright industries and non-dedicated support industries provided jobs for 18,861 and 70,294 people, representing 7.85 per cent and 29.25 per cent of the employment in the copyright industries, respectively.

Within the core copyright sector, press and literature held the largest share of employment, with 50.91 per cent. Software and databases, motion picture, video, radio, and television together accounted for 41.09 per cent of the employment in the sub-sector. In the software and database sub-sector, 11,053 persons (63 per cent) were engaged in data processing and database activities while 6,394 (37 per cent) professionals worked in software programming and consultancy. Very few employees were reported in music, theatrical productions, and operas due to lack of data for most of the economic activities in the sub-sector.

Photographic and cinematographic instruments ranked first in the group of interdependent copyright industries in terms of contribution to employment, representing 64.42 per cent of the employees in the group. Most of these persons were employed in wholesale activity, which reflects the weak manufacturing capability in the sub-sector. With a share of 12.95 per cent, blank recording material represented the second largest employer, followed by TV sets, radios, VCRs, CD players, DVD players, cassette players, electronic games equipment, and other similar equipment, which accounted for 11.14 per cent.

In 2012 the value of copyright exports was 465,501,740 Birr, which was 0.65 per cent of total exports. Copyright product imports were 24,358,767,344 Birr, accounting for 10.87 per cent of the total imports. This shows that there was a deficit of 23,893,265,604 Birr in the balance of trade for the copyright industries. The core copyright industries, with an export value of 13,378,815 Birr, accounted for only 2.87 per cent of the total export value of the copyright sector. The largest deficit was registered in the interdependent group, which amounted to 22,647,781,605 Birr. The value of imports in the group was one hundred times higher than the value of exports.

The export value of the core copyright industries constituted only 0.02 per cent of the total national exports. This indicates the need for a strong effort to improve the sub-sector's export performance. Given the fact that activities in the group of core copyright industries are the principal sources of pure copyright activities and creative industries, the issue merits serious concern.

A comparison of copyright industries with other sectors of the economy showed that the contribution of the copyright industries to GDP was higher than that of many important sectors. Copyright industries contributed

more to the country's GDP than mining and quarrying, hotels and restaurants, financial intermediation, education and health, and social work. The copyright industries also performed better than mining and quarrying, transport and communication, and financial intermediation in terms of employment generation.

With a contribution of 4.73 per cent to the GDP, the share of copyright industries in Ethiopia was higher than in Brunei (1.58 per cent), Bulgaria (4.54 per cent), Colombia (3.3 per cent), Dominica (3.4 per cent), Grenada (4.6 per cent), Jordan (2.43 per cent), Pakistan (4.45 per cent), Peru (2.67 per cent), South Africa (4.11 per cent), Tanzania (4.56 per cent), Thailand (4.48 per cent), and Ukraine (2.85 per cent). In terms of contribution to employment, Ethiopia's copyright industries outperformed similar industries in Brunei (3.2 per cent), Grenada (3.6 per cent), Jamaica (3.03 per cent), Jordan (2.88 per cent), Kenya (3.26 per cent), Pakistan (3.71 per cent), Panama (3.17 per cent), South Africa (4.08 per cent), Romania (4.19 per cent), St. Kitts and Nevis (3.1 per cent), and Thailand (2.85 per cent).

Considering the contribution of 1.96 per cent to GDP, the core copyright industries in Ethiopia have a higher percentage share than the same industries in Jordan (1.53 per cent), Mexico (1.55 per cent), and Pakistan (1.37 per cent). However, the contribution of the industries to the economy of the Philippines (3.53 per cent) was nearly twice as high as the corresponding figure in Ethiopia. The core copyright industries in Tanzania, with 3.22 per cent contribution to GDP, also had a significantly higher value than that of the corresponding industries in Ethiopia.

The general picture emerging from the analysis suggests that copyright-related issues are highly relevant and important for Ethiopia, due to their enormous potential for economic development. Putting in place the right policy measures is therefore necessary for the realization of the potential of these industries for wealth creation, employment generation, and export promotion. The need for government policies that establish an effective link between creativity and economic development is now apparent.

Key points for consideration in copyright policy making should be balancing the interests of copyright holders and improving access to knowledge by consumers. The right balance has to be struck between copyright protection and ensuring adequate access to knowledge and knowledge-based products. This can be achieved through informed copyright policy making. Evidence-based policy allows the use of copyright protection as a stimulus to creativity without negatively affecting access to knowledge and knowledge-based products by the different user groups.

This is a pioneering study in Ethiopia on the economic contribution of the copyright industries. The results confirm the significant role of the sector in the Ethiopian economy and provide a basis for future research. Further evidence for policy making should be obtained from future studies, which should undertake an in-depth analysis of the different sub-sectors.

## 1. Introduction

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The role of the creative industries<sup>3</sup> as a source of national wealth has gained increasing attention over the past few decades. Aside from helping countries to maintain their cultural identity, it has become evident that the creative industries offer them comparative advantages for improving their global competitiveness. The activities of these industries—which include the creation, production, marketing, and distribution of products and services resulting from human creativity—deal with the interplay of various knowledge-based economic activities. They are less dependent on natural resources than traditional economic sectors. Therefore, the shift from an industrial society to an informational society, which relies more on ideas and knowledge, has placed the creative industries at the center of economic development. Today the creative industries serve as a platform for promoting innovation, enhancing services, and reducing unemployment.

Strengthening the capacities of creative industry practitioners and entrepreneurs requires adoption of the right policies. The creation of new products, local distribution, improving access to the global market, and exploiting new opportunities of wealth creation are highly influenced by the policy environment in which the different actors interact with each other. In this view, copyright can play an important role in the development of the creative industries.

Traditionally, discussions on copyright focused on the legal protection of literary and artistic works, with differing views promoted on the interaction of copyright protection with creativity. Such discussions overlooked the substantial role of copyright in national economies in terms of the production, distribution and consumption of copyrighted materials. The past decade, however, has seen growing interest in better understanding the size and economic contribution of those industries that rely on protections afforded by copyright law. In 2003 the World Intellectual Property Organization (WIPO) issued a methodological guide with a view to revealing the economic contribution of copyright industries.<sup>4</sup> This methodology outlines four groups of copyright industries, identified on the basis of their level of dependence on copyright material. It establishes a set of major indicators—contribution to gross domestic product (GDP), employment, and foreign trade—and lays out research standards and approaches. The guidelines have served as the basis for national studies on the economic contribution of copyright industries in many developed and developing countries.

Various national studies undertaken on the basis of the methodological guide have shown the considerable economic impact of copyright in both developed and developing countries.<sup>5</sup> The contribution to GDP varies significantly across countries, from 11.10 per cent in the USA to 1.58 per cent in Brunei. With the average at 5.26 per cent, three-quarters of countries have a contribution between 4 per cent and 6.5 per cent. The contribution of copyright industries to national employment is slightly higher than the share of GDP and stands at an average of 5.49 per cent. Nearly three-quarters of countries fall into the range between 4 per cent and 7 per cent contribution to national employment. Mexico and the Philippines have by far the highest share of their labor force in the copyright industries.<sup>6</sup> The studies also revealed that these industries are among the most dynamic in the trading system.

The fact that similar studies had never been undertaken in Ethiopia made it difficult to realize the fundamental role of copyright in value creation. Ethiopia is home to more than 80 ethnic groups, each with its own language, culture, customs, traditions, and lifestyles. There are rich traditions of art, music, dance, literature, and other forms of creativity. The country thus has great potential to diversify its economy through the use of its cultural heritage and pool of creative talent as a feasible development tool. Using creativity as a strategic asset for economic development in Ethiopia calls for defining effective intervention strategies, which in turn requires understanding and responding to the factors shaping the development of the creative industries.

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<sup>3</sup> The terms *creative industries* and *copyright industries* are used interchangeably throughout the document.

<sup>4</sup> WIPO. (2003) *Guide on Surveying the Economic Contribution of the Copyright-Based Industries*, WIPO Publication No 893 (E), ISBN 978-92-805-1225-7.

<sup>5</sup> Research on the economic contribution of industries that are dependent on copyright and related rights protection has been conducted in more than 40 countries.

<sup>6</sup> World Intellectual Property Organization (WIPO). (2013) *Studies on the Economic Contribution of the Copyright Industries: Overview*. Geneva.



In Ethiopia the Federal Constitution provides for the protection of copyright and the government has also enacted a comprehensive law for copyright and related rights. Furthermore, the cultural policy of Ethiopia recognizes the need for the protection and promotion of the copyright industries. A focus on copyright protection is also one of the strategic directions of the five-year Growth and Transformation Plan (GTP) of Ethiopia, covering the period 2011–2015. These developments in policy and law are important steps toward enhancing the role of literary, artistic, and other creative works in socio-economic progress. However, despite the increasing attention given to the copyright industries in Ethiopia, there has never been a study on the contribution of the sector to the Ethiopian economy. The limited studies on copyright and related matters viewed the subject from a legal perspective. The studies covered areas such as the nature of copyright, the scope of its protection, and infringement and enforcement. This has created an information gap for evidence-based copyright policy making in the country and limited the capacity of policy makers to fully appreciate the potential role of the copyright industries in the growth of the national economy. It was in recognition of this fact that the Ethiopian Intellectual Property Office (EIPO) requested the World Intellectual Property Organization (WIPO) to support this study, which is intended to produce research-based evidence for policy making.

To make a copyright policy firmly based on evidence, it is necessary to properly understand the actual and potential impact of copyright protection on creativity and access to knowledge. Absolute openness is not required to facilitate knowledge sharing, and at the same time, copyright protection does not mean restricting access to everyone except the copyright holder. Harnessing the potential of the creative industries for economic development requires creating a balance between copyright protection and the flows of ideas and knowledge. It is not the intention of this study to delve into the subject of determining the optimal level of copyright protection. Rather, it focuses on providing policy makers with empirical findings, so that proper attention can be given not only to the legal protection of copyright but also to the role of literary, artistic, and other creative works in wealth creation and employment generation.

The primary objective of this study is to assess the impact of copyright industries on the Ethiopian economy by quantifying the contribution of these industries in terms of their value added to the country's GDP, as well as their contribution to employment and the revenue generated from foreign trade. It is also aimed at generating research-based evidence and analysis to inform policymakers about the economic significance of the sector. It is expected that the results of the study will provide data on the actual economic contribution of creative activities, which can serve as bases for adjusting policies and strategies aimed at promoting growth and development in the country's copyright sectors. The evidence produced by the study will also serve as an input to future studies on the determination of the optimal levels of protection standards given by copyright law, and establish a robust level of copyright protection that is acceptable to the different stakeholders. This report is structured into eight chapters. In the next chapter the legal and administrative framework for copyright protection is discussed. Chapter 3 provides an overview of the main features of the Ethiopian economy. Chapter 4 presents the methodology of the study and the approach followed in collecting and analyzing data. The most important findings of the study on the economic importance of copyright, in terms of value added, employment, and external trade, are presented in chapter 5. The chapter analyzes the core, interdependent, partial and non-dedicated support industries by breaking them into sub-sectors. In chapter 6 the findings of this study are compared with results from similar studies in other countries. A description of the profile of selected core copyright industries is provided in chapter 7. The final chapter presents the conclusions of the study and policy recommendations.

## 2. The Copyright System in Ethiopia

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Intellectual property rights are enshrined in the 1994 Constitution of the Federal Democratic Republic of Ethiopia. Article 55(9) of the Constitution empowers the House of Peoples' Representatives to enact laws on patents and copyrights. The protection of patents and copyrights is also among the powers and functions of the Council of Ministers as provided by Article 77(5) of the Constitution. These provisions were further consolidated by different intellectual property laws issued subsequently. The Decree Concerning Inventions, Minor Inventions and Industrial Designs, and the implementing regulations were issued in 1995 and 1997, respectively. Copyright is protected on the basis of the Copyright and Neighboring Rights Decree of 2004. The parliament approved a Trademark Registration and Protection Decree in July 2006 to serve as a legal basis for the protection of trademarks. The Plant Breeder's Right Act enacted in February 2006 also serves to give protection to those who breed and develop new plant varieties.

### 2.1 The Copyright Law of Ethiopia

The Copyright and Related Rights Protection Decree gives protection to literary, artistic, and other creative works, and recognizes rights on works in the following areas:

- Books, booklets, articles in reviews and newspapers, and computer programs
- Speeches, lectures, addresses, sermons, and other oral works
- Dramatic arts, dramatic musical works, pantomimes, choreographic works, and other works created for stage production
- Musical compositions
- Audiovisual works
- Works of architecture
- Works of drawing, painting, sculpture, engraving, lithography, tapestry, and other works of fine art
- Photographic works
- Illustrations, maps, plans, sketches, and three-dimensional works related to geography, topography, architecture, or science

Under Article 3 of the Copyright Law, protection is conferred on works of authors who are nationals of Ethiopia or have their principal residence in the country. Protection is also given to works irrespective of the nationality or residence of the authors if they are first published in Ethiopia or published in Ethiopia within 30 days of their publication abroad. For audiovisual works to be protected in Ethiopia, the producer shall have his headquarters or principal residence in Ethiopia. The provisions of the law also apply to works of architecture erected in Ethiopia and other artistic works incorporated in a building or other structure located in the country.

The rights of performers, producers of sound recordings, and broadcasting organizations are protected as related rights. These rights protect the legal interests of persons and legal entities who contribute to making works available to the public. Related rights give to the right holders the exclusive right to carry out or authorize activities relating to broadcasting/rebroadcasting, reproduction and rental of performances, sound recordings, and broadcasts. Performers and sound recording producers who are nationals of Ethiopia qualify for protection for their performances and sound recordings. The performances of non-nationals get protection under the Law if they take place on the territory of Ethiopia or if they are incorporated in sound recordings or broadcasts that are protected under the Law. Similarly, sound recordings first fixed or first published in Ethiopia get protection under the Law. The provisions of the Law regarding the protection of broadcasts state that it is applicable to broadcasts of organizations whose headquarters are situated in Ethiopia and to broadcasts transmitted from transmitters situated in the country. In the case of sound recordings, the rights also include importation of copies.

The Copyright Law gives protection to works based on or derived from already existing works. These are translations, adaptations, arrangements, and other transformations or modifications of works; and collections of works such as encyclopedias, anthologies, or databases, whether in machine-readable or other form, provided that the collection has original traits.

The Law defines the scope of works not falling under the protection of copyright. These include legal and administrative texts, ideas, procedures, concepts, formulas, numerical tables, principles, and discoveries.

The Copyright Law provides automatic protection to a work if it is original and fixed in material forms. Voluntary registration for a copyright is available in Ethiopia. The owner of a copyrightable work may register his right by applying to the Ethiopian Intellectual Property Office. However, failure to register a work does not affect the protection of copyright and related rights.<sup>7</sup>

The economic rights provided by the Law to the author or owner of a work are the right of reproduction, translation, adaptation, distribution by sale or rental, importation, public display, performance, broadcasting, and other communication of the work to the public. The provisions of the Law, however, do not apply to rental or public lending of a computer program, except where the program is an essential object of the rental or lending. For original works of art or original manuscripts of a writer or a composer, the author or his heirs have the right to have a share of the resale price of the work subsequent to the transfer of the work by the author. The economic rights of a work belong to the author during his/her lifetime and to the heirs fifty years after the author's death.

The Law also gives moral rights to an author irrespective of whether or not he is the owner of the economic rights. These moral rights are: the right to claim authorship of his work, the right to remain anonymous or to publish under a pseudonym, the right to prevent distortion, mutilation or other alteration of his work, and the right to publish his work. The heirs of an author enjoy moral rights until the expiry of the economic rights.

There are also provisions for works that result from employment or commissioning. Under such conditions, the original owner of the work is the employer or the person who commissioned the work. For audiovisual works, the producer shall be the owner of the economic rights. However, the scriptwriter, director, cameraman, lyricist, composer, and other authors have the right of authorship in the work and have the right to economic benefits. In the case of preexisting works included in or adapted for the making of the audiovisual work, the authors maintain their rights.

Exceptions to the rights of copyright owners are intended to strike a balance between the interests of authors and the interests of users and the public at large. These exceptions are:

- (a) reproduction for personal purposes,
- (b) quotation of a published work,
- (c) reproduction for teaching,
- (d) reproduction by libraries, archives, and similar institutes,
- (e) reproduction, broadcasting, and other communication to the public for informatory purpose,
- (f) reproduction of a computer program in a single copy and adaptation of a computer program,
- (g) importation for personal purposes, and
- (h) private performance free of charge.

Another exception to the right of a copyright holder is the distribution of copies of works. According to this exception, after a published work has been sold to the public, the copyright holder no longer has the ability to control that particular copy. For this reason the copy may be redistributed by means of sale without authorization of the right holder. This is based on the principle of exhaustion, an established international legal doctrine. It provides that a copyright owner's right to control copies of his work "exhausts" on its first sale by the copyright owner or with his consent. The principle prevents the copyright owner's right to control

<sup>7</sup> Council of Ministers Copyrightable Works Registration Regulations, No.305/2014.

copies of his work from extending beyond the point at which he receives reasonable remuneration for the copy. Further, it allows the purchaser to have control over the copy, including the right to resell it free from interference by the copyright owner.

In addition to the exceptions described above, the Law limits the rights of copyright holders with compulsory licenses. Normally, in order for someone to reproduce, translate or broadcast a published work, permission must be obtained from the copyright owner. However, in a few circumstances the government may grant a compulsory license without requiring the copyright owner's permission. The user should follow certain rules and pay fees set by regulation. Compulsory licenses serve as compromises between the economic interests of copyright holders and the public interest in using copyrighted material.

The Copyright Law authorizes the courts to award adequate compensation for material and moral damage suffered, including payment of the right holder's expenses. The courts are also authorized to grant injunctions to stop infringement, to order confiscation of infringed copies, and to impound packaging and implements that could be used for the making of documents, accounts or business papers in relation to the infringement activity. The amount of compensation for material damage is fixed on the basis of the extent of material damage suffered by the owner of the right and the amount of profit attributable to the act of infringement. The amount of compensation for moral damage is also based on the extent of the damage and will not be less than 100,000 Birr.

Provisional measures against the infringement of copyright include measures for the prevention of infringed copies from entering the channel of commerce, including imported goods immediately after customs clearance and preservation of relevant evidence in regard to the alleged infringement. The courts may also grant a temporary injunction after a deeper investigation of the relative strengths of the parties. The provisions of the country's civil procedure and criminal procedure codes on search and seizure also apply to acts of copyright infringement. The Law also provides for certain border measures, such as retention of alleged infringing goods by the customs authority based on a written application from the copyright owner.

Criminal sanctions for infringements of copyright include imprisonment. The penalty may also include seizure, forfeiture, and destruction of the infringing goods and of any materials and implements used in the commission of the offense. The Law provides for imprisonment for a term of not less than five years and not more than ten years for intentional violation of copyright. Violation of copyright through gross negligence may result in imprisonment ranging from one to five years.

### **2.1.1 *The Institutional Framework for Copyright Protection***

The government body responsible for the administration of intellectual property rights in Ethiopia is the Ethiopian Intellectual Property Office. The office, which was established in 2003 by decree, facilitates the provision of adequate legal protection for intellectual property rights. The office also studies, analyses, and recommends policies and legislation on intellectual property to the government. The powers and duties of the office include, among others:

1. creating an information system on intellectual property rights and providing services to users;
2. implementing intellectual property laws and regulations issued by the government;
3. designing and implementing an extensive and coordinated popularization strategy to create and strengthen awareness about intellectual property among the general public;
4. undertaking studies on intellectual property and following up national and international developments in the field of intellectual property;
5. implementing and/or following up the implementation of intellectual property policies, as well as international agreements to which Ethiopia is a party;
6. providing advisory services on intellectual property matters to public, state and private organizations and professional associations as well as individuals; and
7. facilitating the establishment of associations of authors, inventors, musicians and similar societies.

A national intellectual property council advises the office on policy proposals to be submitted to the government. The council also advises the office on guidelines, programs, and activity reports. Members of the council are drawn from relevant government offices, enforcement agencies, and copyright holders' associations.

Another body with responsibilities for the administration of copyright is the Ethiopian Copyright Collective Management Society. The society was established with the objectives of administering the rights of its members, enhancing their benefits, and promoting the works of its members inside and outside Ethiopia. It serves as an umbrella association for eleven copyright holder associations, which have their own representations within the society. However, the Society has not yet started actively discharging its duties to their fullest extent and no royalties have been collected so far. An amendment to the Copyright Law of Ethiopia, recently approved by Parliament, provides that a collective management society be formed based on the recognition granted by the Ethiopian Intellectual Property Office. The amendment empowers a collective management society to collect royalties from users of protected works and administer rights related to foreign protected works on the basis of reciprocal agreements entered into with similar societies.

### 3. Main Features of the Ethiopian Economy

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Ethiopia is a country of diverse demographic, socio-cultural, and natural features. The country is the second most populous nation in Africa and home to more than 80 ethnic groups. In 2012, Ethiopia was the twelfth fastest growing economy in the world.<sup>8</sup> In the 2012/13 fiscal year, Ethiopia's economy grew by 9.7 per cent, the tenth year in a row of robust growth. The average annual real GDP growth rate for the last decade was 10.9 per cent. Agriculture, which accounts for 42.7 per cent of GDP, grew by 7.1 per cent, while industry, accounting for 12.3 per cent of GDP, rose by 18.5 per cent; and services, with 45 per cent of GDP, increased by 9.9 per cent in 2012/13.<sup>9</sup>

The government of Ethiopia, together with development partners, has implemented various poverty reduction strategies to promote economic growth in recent years. The latest sustainable growth strategy, the Growth and Transformation Plan (GTP), covers the period from 2010/11–2014/15. This plan focuses on seven strategic pillars that include sustainable and equitable economic growth, maintaining a focus on agriculture, improving social development and promoting gender and youth empowerment. The GTP was preceded by the Plan for Accelerated and Sustainable Development to End Poverty (PASDEP, 2005/6–2009/10) and the Sustainable Development and Poverty Reduction Program (SDPRP, 2002/3–2004/5). The GTP aims to extend the functions of the PASDEP and achieve the Millennium Development Goals by 2015, as well as realizing middle-income country status by 2020–2023.

Ethiopia is highly dependent on the agricultural sector for income, employment, and export earnings. Although its share of GDP has been declining steadily over the past decade, agriculture continues to be the backbone of the Ethiopian economy, contributing 42.7 per cent to the GDP, about 80 per cent of employment, and 70 per cent of export earnings in 2012/13.<sup>10</sup> The bulk of agricultural output and value added is generated by peasant production. Of the total production in 2011/12, 97 per cent (225 million quintals) was produced by smallholdings and the remaining 3 per cent (7 million quintals) by commercial farms. This clearly shows the significance of smallholding farmers in crop production. Some of the finest coffees in the world are grown in Ethiopia, and the country is now the largest coffee producer in Africa. Similarly, Ethiopia has one of the largest livestock resources in the world. The sector also supplies factor inputs to the country's manufacturing sector.

Agricultural productivity is one of the lowest in sub-Saharan Africa. This indicates that there are untapped opportunities to increase production and productivity by promoting modern farming practices. Scaling up the practices of model farmers to the others by promoting the use of modern technologies, supporting the commercialization of agriculture and the production of high-value crops, encouraging micro-irrigation schemes, and improving marketing institutions and infrastructures are key policy tools that the government is pursuing to enhance agricultural production and productivity.

The industry sector accounted for 12.3 per cent of the GDP at constant prices in 2012/13. The role of industry in terms of supplying consumer goods, generating employment opportunities, absorbing agricultural raw materials, and earning foreign exchange through exports is very limited. The share of the manufacturing sector in industrial output was 36.5 per cent, with large and medium scale manufacturing taking the largest share. The manufacturing sector is dominated by manufacturing plants, such as those engaged in construction materials, metal and chemical products, and basic consumer goods including food, beverages, leather, clothing and textiles.

The service sector is made up of retail and wholesale trade, hotels and restaurants, transport and communications, banking, insurance and real estate, education, health, and domestic and other services. In 2012/13 the sector accounted for 45 per cent of the GDP at constant prices. Within the service sector, the largest sub-sector is distribution, which comprises retail and wholesale trade, hotels, transport, and communications. Distribution services contributed 23.8 per cent of GDP at constant prices in 2012/13. Wholesale and retail trade contributed 15.7 per cent of GDP and accounted for 66.2 per cent of the share

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<sup>8</sup> [www.worldbank.org/en/news/press-release/2013/06/18/ethiopia-economic-update-laying-the-foundation-for-achieving-middle-income-status](http://www.worldbank.org/en/news/press-release/2013/06/18/ethiopia-economic-update-laying-the-foundation-for-achieving-middle-income-status) (accessed 15 January 2015).

<sup>9</sup> [www.africaneconomicoutlook.org/fileadmin/uploads/aeo/2014/PDF/CN\\_Long\\_EN/Ethiopia\\_EN.pdf](http://www.africaneconomicoutlook.org/fileadmin/uploads/aeo/2014/PDF/CN_Long_EN/Ethiopia_EN.pdf) (accessed 15 January 2015).

<sup>10</sup> [www.afribiz.info/content/2014/ethiopia-economy-2014-recent-developments-and-prospects](http://www.afribiz.info/content/2014/ethiopia-economy-2014-recent-developments-and-prospects) (accessed 15 January 2015).

of the distribution service. The growth trend of the service sector showed that the sector has been gaining much importance in GDP; its share increased from 38 per cent to 45 per cent in 10 years. The highest increase was observed in the wholesale and retail trade and in hotels and restaurants. The sector is also gaining more prominence in terms of employment. According to data from CSA, about half of the people employed in urban areas are absorbed by service sectors. In addition, the informal sector, which is mainly concerned with services, makes up 31.7 per cent of urban employment.<sup>11</sup>

**Table 1: Growth Rates of GDP by Major Industrial Classification at Constant Prices (per cent)**

Sector	2010/11	2011/12	2012/13
Overall real GDP	11.4	8.5	9.7
Agriculture	9.0	4.9	7.1
Industry	15.0	17.1	18.5
Services	12.5	10.6	9.9

Source: Ministry of Finance and Economic Development (MoFED) and National Bank of Ethiopia (NBE).

The source of most of this overall economic growth is attributed to the growth in the agriculture and service sectors. As these sectors make up the lion's share of the economy, improvements in their growth boost the growth of the economy overall. Growth in the service sector emanated mainly from the expansion of hotels and restaurants, real estate and housing, transport and communication, banking, and insurance and trading activities. In the industrial sector, the increment mainly emanated from the boom in the construction sector and growth in energy.

**Table 2: GDP by Economic Activity at Constant Prices in 2011/12**

Economic activity	Value	Per cent share
Crop production	153,986,123,200	30.40
Animal Farming and Hunting	48,120,663,500	9.50
Forestry	20,261,332,000	4.00
Mining and Quarrying	7,633,456,831	1.51
Manufacturing	20,337,311,995	4.02
Electricity and Water	6,463,364,908	1.28
Construction	21,284,529,266	4.20
Wholesale and Retail Trade	79,727,834,887	15.74
Hotels and Restaurants	18,504,167,982	3.65
Transport and Communications	22,159,312,275	4.37
Financial Intermediation	15,077,470,207	2.98
Real Estate, Renting and Business Activities	45,232,410,623	8.93
Public Administration and Defense	19,646,400,574	3.88
Education	10,508,539,842	2.07
Health and Social Work	4,112,037,329	0.81
Other Community, Social, and Personal Services	12,107,665,470	2.39
Private Households with Employed Persons	1,370,679,109	0.27
<b>Total</b>	<b>506,533,300,000</b>	<b>100</b>

Source: MoFED.

<sup>11</sup> Central Statistical Agency. (2012) *Statistical Report on the 2012 Urban Employment Unemployment Survey*, Addis Ababa.

Development of the micro and small enterprises sector is thought to be the major source of employment and income generation for a wide group of society in general and urban youth in particular. According to the Federal Micro and Small Enterprise Development Agency, a total of 70,455 new micro and small enterprises (MSEs) were established in 2011/12, employing 806,322 people. The total employment has grown by 23.8 per cent, compared to that of 2010/11. The five-year Growth and Transformation Plan (GTP), which covers the period 2010/11–2014/15, envisages creating a total of three million Micro and Small-Scale Enterprises (MSE's) by the end of the Plan period.

Several strategies are indicated in the GTP to enable Medium- and Large-Scale Manufacturing Industries create a competitive national economy by ensuring rapid and sustainable technological transfer, being export-oriented, and creating an environment conducive for micro and small enterprises and agricultural developments. The strategies include attracting foreign investors to increase their investment in key industries by giving them all-round and effective support, encouraging industries which produce goods for the export market and substitute imports by giving them priority in accessing credit and other incentives, tuning higher education and Technical Vocational Education and Training (TVET) institutions to support industrial development, and developing industrial zones to deliver land efficiently and at affordable prices for industrial development.<sup>12</sup>

Over 82 per cent of Ethiopians live in rural areas and depend mainly on agriculture for their livelihood. In urban areas, the total number of employed persons in 2012 was 5,726,116. According to the CSA, 757,055 people were employed by the manufacturing sector. The corresponding figure for distributive services was 1,953,438 people, which accounted for 34.11 per cent of urban employment. Wholesale and retail trade, hotels and restaurants, and transport and communication employed 1,235,258, 457,810 and 260,370 people, respectively.<sup>13</sup>

**Table 3: Currently Employed Population of Urban Areas by Industrial Divisions in 2012**

Industrial Division	Number of Employees
Agriculture, hunting, forestry and fishing	469,377
Mining and quarrying	21,374
Manufacturing	757,055
Electricity, gas and water	53,226
Construction	395,129
Wholesale and retail trade	1,235,258
Hotels and restaurants	457,810
Transport, storage and communications	260,370
Financial intermediation	115,655
Real estate, renting and business activities	119,259
Public administration and defense; compulsory social security	381,757
Education	407,272
Health and social work	182,330
Other community, social and personal service activities	566,625
Private households with employed persons	269,616
Extra-territorial organizations and NGOs	34,003
<b>Total</b>	<b>5,726,116</b>

Source: CSA.

<sup>12</sup> FDRE. (2013) *Annual Progress Report for F.Y. 2011/12 Growth and Transformation Plan*. Ministry of Finance and Economic Development (MOFED), Addis Ababa.

<sup>13</sup> CSA. (2012) *Urban Employment Unemployment Survey*.



In 2012 Ethiopia's exports amounted to 71,434,925,500 Birr, which was 14.11 per cent of the GDP. The value of total imports in the same year was 223,999,290,000 Birr, accounting for 44.24 per cent of the GDP. This indicates that there was a trade deficit amounting to 152,564,364,500 Birr. The major export items of the country were coffee, gold, oil seeds and chat. On the import side, capital goods accounted for the lion's share of the country's total import bill, followed by imports of non-durable consumer goods, semi-finished goods, and petroleum.

Household consumption and expenditure surveys provide data on household expenditure patterns, values, and distributions at national and regional levels, in order to observe trends in living standards and welfare. Such surveys also provide information on estimates of household consumption expenditure for the compilation of national accounts. This gives an idea of the demand for copyright products and services. In Ethiopia a Household Consumption and Expenditure (HCE) survey is administered by the Central Statistical Agency every five years, with the most recent one conducted in 2010/11. The survey shows that 46.1 per cent of expenditure is on food and non-alcoholic beverages, while households spend 22.2 per cent of their income on housing, water, electricity, and gas and other fuels. Expenditure on clothing and footwear and on furnishings, household equipment, and maintenance accounted for 5.1 per cent and 4.3 per cent, respectively.

**Table 4: Household Expenditure by Item Category in 2010/11**

Item	Per cent
Food and non-alcoholic beverages	46.1
Alcohol, tobacco, coffee, tea, chat and buckthorn	3.3
Clothing and footwear	5.1
Housing, water, electricity, gas and other fuels	22.2
Furnishings, household equipment and maintenance	4.3
Health	1.0
Transport	2.5
Communication	1.3
Recreation and culture	0.5
Education	0.4
Restaurants and hotels	0.3
Miscellaneous goods and services	6.8
Unincorporated household enterprise expenditure	6.2
Total	100

Source: CSA.

## 4. Methodology and Data Sources

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### 4.1 Study Approaches

The study adopts the methodology developed by WIPO for estimating the economic contribution of copyright industries. The “*Guide on Surveying the Economic Contribution of the Copyright Based Industries*” published by WIPO in 2003 provides proposals on how to organize relevant information, how to structure the research, which measurements to use, and how to present the analysis. The guide recommends applying methodologies recommended by the System of National Accounts<sup>14</sup> and using international classification systems.

A study on the economic contribution of the copyright industries includes measuring value added, employment, and external trade for industries that are influenced by copyright. The WIPO guide recommends the following four steps for undertaking such a study:

1. identification and classification of the copyright industries,
2. data collection,
3. measurement of the contribution of the copyright industries, and
4. analysis and presentation of the survey results.

The Ethiopian survey follows the categorization of the copyright industries presented in the guide. The WIPO guide categorizes copyright industries into core copyright industries, interdependent copyright industries, partial copyright industries, and non-dedicated support industries.

*Core copyright industries:* For some sectors or industries, copyrighted works have fundamental importance; that is, the industries would not exist without copyrighted works and other matter. These industries are called core copyright industries. Such industries are wholly engaged in the creation, production and manufacturing, performance, broadcast, communication and exhibition, or distribution and sales of works and other protected subject matter. They operate nearly exclusively with copyrighted works. All activities of these industries should be included in measures of the economic importance of copyright. These groups of industries are: press and literature; music, theatrical productions, and operas; motion picture and video; radio and television; photography; software and databases; visual and graphic arts; advertising services; and copyright collective management societies.

*Interdependent copyright industries:* Other industries depend on copyrighted works, and their operations would be considerably smaller without copyrighted works and other subject matter. These industries produce devices or hardware that is used for the creation, production, distribution, and consumption of copyrighted works. These industries are referred to as interdependent copyright industries. The interdependent industries include the manufacture, wholesale, and retail (sales and rental) of TV sets, radios, VCRs, CD players, DVD players, cassette players, electronic games equipment, and other similar equipment; computers and equipment; musical instruments, photographic, and cinematographic instruments; photocopiers; blank recording material; and paper.

*Partial copyright industries:* The third category, the partial copyright industries, contains industries in which a portion of the activities is related to copyrighted works and other protected subject matter. The partial copyright industries involve the creation, production and manufacturing, performance, broadcast, communication and exhibition, or distribution and sales of works. This category of industries includes apparel, textiles and footwear; jewelry and coins; other crafts; furniture; household goods, china and glass; wall coverings and carpets; toys and games; architecture, engineering, and surveying; interior design; and museums.

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<sup>14</sup> The System of National Accounts (SNA) consists of a coherent, consistent, and integrated set of macroeconomic accounts, balance sheets, and tables based on a set of internationally agreed concepts, definitions, classifications, and accounting rules. The SNA was developed jointly by the Commission of the European Communities, Eurostat, the International Monetary Fund, the Organization for Economic Cooperation and Development, the United Nations, and the World Bank under the auspices of the Inter-Secretariat Working Group on National Accounts.

*Non-dedicated support industries:* The final category is the non-dedicated support industries, in which a portion of the activities is related to facilitating the broadcast, communication, distribution, or sales of works and other protected subject matter whose activities have not been included in the core copyright industries. General wholesale and retailing, general transportation, and telecommunications fall into this category.

The activities for the Ethiopian study that were identified on the basis of the guide are indicated in the following table:<sup>15</sup>

**Table 5: List of Copyright Industries Studied in Ethiopia**

Category	Groups
Core copyright industries	Press and literature
	Music, theatrical productions, operas
	Motion picture and video
	Radio and television
	Software and databases
	Advertising services
Interdependent copyright industries	TV sets, radios, VCRs, CD players, DVD players, cassette players, electronic games equipment, and other similar equipment
	Computers and equipment
	Musical instruments
	Photographic and cinematographic instruments
	Photocopiers
	Blank recording material
	Paper
Partial copyright industries	Apparel, textiles and footwear
	Furniture
	Household goods, china and glass
	Architecture, engineering, surveying
	Interior design
	Museums
Non-dedicated support industries	General wholesale and retailing
	General transportation
	Telecommunication

Information on many business activities is organized according to the Ethiopian Standard Industrial Classification (ESIC) of 2010, prepared by the Ministry of Trade. The classification is mainly used for business licensing purposes. ESIC is an adaptation from the International Standard Industrial Classification (ISIC). In developing ESIC, the practices of the USA, Singapore, South Africa, and Britain have been considered by the Ministry for benchmarking. The Ministry found the experience gained from South Africa and Singapore to be more suitable for Ethiopian conditions; hence, the benchmarking is based on the adapted ISIC systems of the two countries. Although there are some areas where ESIC and ISIC differ in the aggregation of data, there is a rough correspondence between the two classifications. A comparison of the Ethiopian Standard Industrial Classification (ESIC) and the International Standard Industrial Classification (ISIC) given in Table 6 shows that, except in a few cases, there is correspondence in the naming of the activities. However, the codes used for the activities in the two classifications are different.

<sup>15</sup> Data on photography and visual arts were included in the study for import and export analysis.

**Table 6: Correspondence between ESIC and WIPO Classification (ISIC)**

	ESIC	Code	ISIC	Code
Core copyright industries	Publishing of newspapers, journals, and periodicals	3242	Publishing of newspapers, journals, and periodicals	2212
	Publishing of books, brochures, musical books, and other publications	3241	Publishing of books, brochures, and other publications	2211
	Other publishing	3249	Other publishing	2219
	Publishing of recorded media	3243		
	Printing and service activities related to printing	325	Printing	2221
	Service activities related to printing	3253	Services activities related to printing	2222
	Library and archive activities	9631	Library and archive activities	9231
	News agency activities	962	News agency activities	9220
	Wholesale trade in other household goods	6139	Wholesale of other household goods	5139
	Other retail trade in new goods in specialized stores	623	Other retail sale in specialized stores	5239
			Software publishing	7221
	Software consultancy and supply	8620	Other software consultancy and supply	7229
	Database activities	8640	Database activities and online distribution	7240
	Data processing	8630	Data processing	7230
			Writers, directors, actors	9214
	Wholesale of record albums, cassette tapes, laser discs and compact discs (including VCDs, DVDs)	61333	Wholesale and retail of recorded music (sale and rental)	5233
	Retail trade in recorded CDs, VCDs and related products	62397		
	Wholesale of books and magazines	61344		
	Radio and television activities	9613	National radio and television broadcasting companies	9213
			Other radio and television broadcasters	9213
	Advertising	885	Advertising	7430
	Activities of professional organizations	9512	Activities of professional organizations	9112
	Radio and television activities	9613	Radio and TV activities	9213
	Other business activities	88	Other business activities	7499
	Dramatic arts, music and other arts activities	9614	Dramatic arts and music and other arts activities	9214
	Other entertainment activities n.e.c.	9619	Other entertainment activities	9219
			Other recreational services	9249
			Publishing of music	2213
	Reproduction of recorded media	3260	Reproduction of recorded media	2230
	Motion picture, theater and video production and distribution	9611	Motion picture and video production and distribution	9211
	Motion picture projection	9612	Motion picture projection	9212
	Photographic activities	8865	Photographic activities	7494
	Translation and secretarial services	99031	Other business activities n.e.c. (for translation and interpretation)	7499

**Table 6: Correspondence between ESIC and WIPO Classification (ISIC) (continued)**

Interdependent copyright industries	Renting of office machinery and equipment (including computers)	8523	Renting of office machinery and equipment (including computers)	7123
	Wholesale trade in office machines and equipment (including accessories)	6152	Wholesale of computers, computer peripheral equipment and software	5151
	Wholesale trade in hardware and computer accessories	61523		
	Wholesale trade in software	61524		
			Retail sale of household appliances, articles and equipment	5233
	Manufacture of musical instruments	3922	Manufacture of musical instruments	3692
	Wholesale of musical instruments and scores	61332	Wholesale of other household goods	5139
	Retail trade in musical instruments	62396	Retail sale of household appliances, articles and equipment	5233
	Rental of musical instruments	96142		
	Manufacture of pulp, paper and paperboard and of containers made from paper product	3231	Manufacture of pulp, paper and paperboard	2101
	Wholesale trade in other intermediate products, waste and scrap	6149	Wholesale of other intermediate products, waste and scrap	5149
			Other retail sale in specialized stores	5239
	Manufacture of television and radio receivers, sound or video recording or reproducing apparatus, and associated goods	3730	Manufacture of TV and radio receivers, sound or video recording or reproducing apparatus, and associated goods	3230
	Wholesale of radio and television sets and sound reproducing and recording equipment and supplies except electrical and electronic components	61326		
	Manufacture of office, accounting, and computing machinery	3590	Manufacture of office, accounting, and computing machinery	3000
			Wholesale of other machinery, equipment, and supplies	5159
	Manufacture of optical instruments and photographic equipment	3750	Manufacture of photographic and optical equipment	3320
	Wholesale trade in photographic apparatus, equipment and supplies, and optical goods	61397	Wholesale of other household goods	5139
	Other retail trade in new goods in specialized stores	623	Other retail sale in specialized stores	5239
	Renting of other machinery and equipment n.e.c.	8529	Renting of other machinery and equipment n.e.c	7129
Manufacture of other chemical products		Manufacture of other chemical products n.e.c	2429	
Wholesale trade in electronic components	61516	Wholesale of electronic and telecommunications parts and equipment	5152	
Wholesale trade in telecommunications equipment	61515			
Retail trade in household furniture appliances, articles, and equipment	6237	Retail sale of household appliances, articles, and equipment	5233	

**Table 6: Correspondence between ESIC and WIPO Classification (ISIC) (continued)**

Partial copyright industries	Manufacture of made-up textile articles, except apparel	3121	Manufacture of made-up textile articles	1721
	Manufacture of wearing apparel, except fur apparel	3140	Manufacture of wearing apparel	1810
	Manufacture of footwear	3170	Manufacturing of footwear	1920
	Wholesale trade in textile fibers, textiles, clothing, footwear, and leather goods	6131	Wholesale of textile, clothing, and footwear	5131
	Manufacture of furniture	3910	Manufacture of furniture	3610
	Wholesale trade in household furniture requisites and appliances	61391		
	Retail trade in household furniture appliances, articles, and equipment	6237		
	Renting of personal and household goods n.e.c.	853	Renting of personal and household goods n.e.c.	7130
	Manufacture of glass and glass products	3411	Manufacture of glass and glass products	2610
	Manufacture of knitted and crocheted fabrics and articles	3130	Manufacture of knitted and crocheted fabrics and articles	173
	Manufacture of other fabricated metal products n.e.c.	3559	Manufacture of other fabricated metal products n.e.c.	2899
	Manufacture of made-up textile articles, except apparel	3121	Manufacture of made up textiles articles	1721
	Retail trade in textiles, clothing, footwear, and leather goods	6236	Retail sale of textiles, clothing, footwear, and leather goods	5232
	Manufacture of carpets, rugs, and mats	3122	Manufacture of carpets and rugs	1722
	Manufacture of other paper products	3239	Manufacture of other articles of paper and paperboard	2109
	Wholesale of furnishings (including curtains, carpets, wall paper)	61322	Other retail sale in specialized stores	5239
	Manufacture of games and toys	3924	Manufacture of games and toys	3694
	Wholesale of toys and games	61334	Wholesale of other household goods	5139
	Other retail trade in new goods in specialized stores	623	Other retail sale in specialized stores	5239
	Museum activities and preservation of historical sites and buildings	9632	Museum activities and preservation of historical sites and buildings	9232
	Architectural, engineering, construction, and related technical consultancy	882	Architectural and engineering activities and related technical consultancy	7421
	Manufacture of jewelry and related articles	3921		
	Manufacture of jewelry and related articles	3691		
	Wholesale trade in precious stones, jewelry, and silverware	61392		
	Wholesale of other household goods	5139		
	Retail trade in jewelry, watches and clocks	62394		
	Other retail sale in specialized stores	5239		

**Table 6: Correspondence between ESIC and WIPO Classification (ISIC) (continued)**

Non-dedicated copyright industries	Wholesale trade in machinery, equipment, and supplies	615	Wholesale of machinery, equipment, and supplies	515
	Other wholesale trade n.e.c	411	Other wholesale	519
	Retail trade, except of motor vehicles and motor cycles; repair of personal and household goods	62	Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods	52
	Other retail trade in new goods in specialized stores	623	Other retail trade of new goods in specialized stores	523
	Land transport; transport via pipelines	71	Land transport; transport via pipelines	60
	Railway transport	7111	Transport via railways	601
	Other land transport	712	Other land transport	602
	Water transport	72	Water transport	61
	Air transport	73	Air transport	62
	Supporting and auxiliary transport activities; activities of travel agencies	74	Supporting and auxiliary transport activities	630
	Cargo handling	7411	Cargo handling	
	Storage and warehousing	7412	Storage and warehousing	
	Other supporting transport activities	7413	Other supporting transport activities	
	Travel agency and related activities	7414	Activities of travel agencies and tour operators; tourist assistance activities n.e.c.	6304
	Activities of other transport agencies	7419	Activities of other transport agencies	6309
			Post and courier activities	641
	National postal activities	7511	National post activities	6411
	Courier activities other than national postal activities	7512	Courier activities other than national post activities	6412
	Telecommunication	7520	Telecommunication	6420

## 4.2 Data Sources

Data for the study were obtained mainly from the Central Statistical Agency of Ethiopia (CSA), the Ministry of Finance and Economic Development (MoFED), the Ethiopian Revenues and Customs Authority (ERCA), and the National Bank of Ethiopia (NBE). Individual consultations were held with experts from these government institutes, which helped the research team to identify sources of secondary information. The consultations also gave the team some useful insights into the approaches to the measurement of the relevant economic indicators in Ethiopia.

CSA conducts several surveys to collect and compile economic statistics in various sectors. These surveys include Large and Medium Scale Manufacturing Industry Surveys, Small Scale Manufacturing Industry Surveys, Quarterly Manufacturing Business Surveys, Quarterly Producers Price Indexes, and Distributive Trade statistics. CSA uses ISIC rev. 3.1 down to four digits for: Large and Medium Scale Manufacturing Industry, Small Scale Manufacturing Industry, Quarterly Manufacturing Business Survey, and Quarterly Producers Price Index. CSA also publishes an Annual Statistical Abstract, which contains national accounts data and external trade statistics, among others. ISIC rev.4 is used for distributive trade statistics and construction statistics.

MoFED compiles the national accounts of Ethiopia. In the measurement of national accounts, three basic approaches may be applied depending upon the available statistics, i.e. production, income and expenditure approaches. (a) The production approach: takes production as the total value of goods and services less intermediate inputs originating in the various industries which make up the economy; (b) the income approach: considers production as the sum of the incomes received by those producing these goods and services; and (c) the expenditure approach: sums up the value of the final uses of goods and services reduced by the value of imports of goods and services. In Ethiopia's national accounts, the production approach has been used mainly, except in the case of public administration and defense, education, and medical and health services, where the expenditure approach is applied. The national accounts for Ethiopia are largely based on the 1993 System of National Accounts, with few exceptions. The GDP data are compiled according

to the Ethiopian Fiscal Year (July 8th to July 7th) and are presented as the GDP at current market prices and at constant market prices.<sup>16</sup> This study used the GDP at constant market prices to compute the contribution of the copyright industries. MoFED publishes only the aggregate figures by major industrial classifications and the detailed data are not publicly available. The research team obtained detailed information on sector activities after having made a special request to the Ministry.

The key measure of an industry's economic contribution is the 'value added'. Value added is the value of gross outputs of a particular industry less the value of inputs from other industries. The sum of all industries' value added is the nation's gross domestic product (GDP). Thus, looking at the value added of the copyright industries provides a measure of the relative importance of the copyright industries. Data reported by MoFED and CSA are used for the measurement of value added of the copyright industries in Ethiopia. Value added may be calculated either before or after deducting the consumption of fixed capital on the fixed assets used. When consumption of fixed capital is deducted from GVA, the net value added is obtained. In the survey on the economic contribution of the copyright industries in Ethiopia, the GVA was used.

The number of employees in the copyright industries is obtained by analyzing the CSA Urban Employment Unemployment Survey. CSA has been carrying out the Urban Employment Unemployment Survey program since 2003. The survey provides data on the size, distribution and characteristics of the employed population by occupation and industry, status in employment, sector of employment, and earnings from employment. The survey follows international standard definitions of economic and noneconomic activities in order to determine the activity status of the population.

Import and export trade statistics are obtained from ERCA, CSA and the National Bank of Ethiopia. The trade system used in Ethiopia is general and compiled on the basis of the Harmonized System (HS).<sup>17</sup> The HS is a six-digit level international nomenclature; however, countries adopting the HS may make provisions for further subdivisions beyond the six-digit level. In Ethiopia, the tariff classification number consists of eight digits that expand on the six-digit classification codes set out in the HS.

### 4.3 Data Challenges

The research team could not acquire data for some of the activities in the copyright industries. Information obtained from the official sources lacked data in the following areas:

#### **Core copyright industries:**

- Photography (except import-export data)
- Visual and graphic arts (except import-export data)
- Collective management organizations

#### **Partial copyright industries:**

- Jewelry and coins
- Wall coverings and carpets
- Toys and games

In the non-dedicated support industries, employment data for transport and communication obtained from CSA were lumped together and it was not possible to get figures from other sources which could be used for data disaggregation.

It was also not possible to include data on gross output, because of lack of information for some of the sub-sectors. Data obtained from MoFED contained complete information on gross output. On the other hand, information obtained from the various reports produced by CSA indicated only the value added. This made it difficult to consistently indicate the gross outputs for all the sub-sectors.

<sup>16</sup> GDP at current prices is GDP at prices of the current reporting period; it is also known as nominal GDP. On the other hand, constant price estimates of GDP are obtained by expressing values in terms of a base period.

<sup>17</sup> The HS Code is a standard issued by the World Customs Organization (WCO) to unify the classification of the goods. It is the standardized coding system of names and numbers used in international trade.



It was difficult to get disaggregated data on employee incomes from the publications of CSA. However, the research team used the average monthly income in the various sub-sectors and the number of employees reduced by the corresponding copyright factors (for the partial and non-dedicated industries) to calculate employee income. Information on the two factors was obtained from CSA's report on the employment-unemployment survey of 2012.

#### 4.4 Determination of Copyright Factors

Establishing copyright factors enables the weighting of the portion of a specific industry that can be attributed to copyright or the level of dependence on copyright. Depending on the industry under consideration, the copyright factor may take a value between 0 and 1. The WIPO guide recommends that industries that only produce products and works and other protected subject matter should have a copyright factor value of 1, whereas industries having nothing to do with copyright should have a copyright factor value of 0. The weightings must be done in relation to the interdependent, partial, and non-dedicated copyright industries. The weights have to be applied before summing the portion of the value added, employment, or foreign trade attributed to copyright in these sectors with contributions of the core copyright industries.

In establishing copyright factors for the interdependent, partial, and non-dedicated copyright industries, one of the approaches to be followed is analysis of the components that make up each sector and the scale of activity associated with each component. Another consideration to be borne in mind is the use of international comparisons as an important source of information.<sup>18</sup> The approaches and solutions of researchers in countries with similar legal frameworks, economic structure, etc., could serve as references to determine specific copyright factors. These methods have been adopted in the Ethiopian study.

Since the core copyright industries are wholly engaged in the creation, manufacturing, and distribution of protected works and other protected subject matter, their copyright factor is one. Similarly, the interdependent industries are closely integrated in the creation, distribution, and use of the products of the core copyright industries, and a large part of the value added they create is directly related to those industries. Therefore, a copyright factor of one is adopted for this category of industries. For the partially copyright industries, the copyright factors are based on the data used and justifications given in the studies conducted in Kenya, Malawi, and Singapore. The study team opted to use the experience of other countries because conducting a national survey is time-consuming and it may be difficult to get an acceptable response rate. Furthermore, the intellectual property system in Ethiopia is very young compared to that of many other African countries, and there is a low level of awareness of the system among the different groups concerned. Addressing questions related to copyright activities requires knowledge of the intellectual property system. Therefore, it is not an easy task for enterprises in Ethiopia to determine the extent to which their different activities are based on copyright. The team chose Kenya, Malawi, and Singapore for different reasons. The choice of Kenya and Malawi was mainly due to various commonalities with Ethiopia in their socio-economic situations. On the other hand, the choice of Singapore was influenced by information obtained from previous studies that based their assumptions on the patterns from the Singapore study.

A relatively higher copyright factor compared to that of other countries was used in the Ethiopian study for apparel, textiles, and footwear. The copyright factor for this specific group of activities is determined on the basis of information from the Household Consumption and Expenditure Survey of 2010/11 carried out by CSA. The survey showed that clothing and footwear account for 5.1 per cent of the household consumption expenditure and rank third, next to food and non-alcoholic beverages and housing, water, electricity, and gas and other fuels. Many official reports indicate the key role of textiles and footwear in current manufacturing activities and the big potential of the sector in expanding the country's exports. A final point taken into consideration in determining the copyright factor for apparel, textiles, and footwear is the large number of applications filed for industrial design protection by the Ethiopian Intellectual Property Office for footwear designs. A good number of the applications are given protection certificates by the office.<sup>19,20</sup> This is a manifestation of the high intellectual property content of the products of the sub-sector.

<sup>18</sup> WIPO. (2003).

<sup>19</sup> This information is based on examination of different issues of the quarterly Intellectual Property Gazette published by EIPO.

<sup>20</sup> Depending on the particular national law and the kind of design, an industrial design may also be protected as a work of art under copyright law.

For the non-dedicated support industries, the formula recommended by WIPO is applied to derive the copyright factor.<sup>21</sup> Using the values computed in chapter 5, the factor is given by:

Copyright Factor for NDSI=Value added for core, interdependent, and partial Non–distribution GDP

$$0.047=9,945,308,947+7,061,467,096+2,172,916,485/506,533,300,000-102,330,199,955$$

The formula is based on the assumption that the proportionate contribution of the copyright industries to the distribution industries would be the same as the percentage contribution of the copyright industries to the total non-distribution industries. This means that the copyright factors to be derived in the non-dedicated support industries are the aggregate of the value added in core, interdependent, and partial copyright industries as a ratio of the non-distribution GDP.

**Table 7: Copyright Factors Used for the Ethiopian Study**

	Copyright factor
<b>Core copyright industries</b>	
Press and literature	1.0
Music, theatrical productions, operas	1.0
Motion picture and video	1.0
Radio and television	1.0
Software and databases	1.0
Advertising services	1.0
<b>Interdependent copyright industries</b>	
TV sets, radios, VCRs, CD players, DVD players, cassette players, electronic games equipment, and other similar equipment	1.0
Computers and equipment	1.0
Musical instruments	1.0
Photographic and cinematographic instruments	1.0
Photocopiers	1.0
Blank recording material	1.0
Paper	1.0
<b>Partial copyright industries</b>	
Apparel, textiles and footwear	0.05
Furniture	0.045
Household goods, china, and glass	0.05
Architecture, engineering, surveying	0.1
Interior design	0.083
Museums	0.5
<b>Non-dedicated support industries</b>	
General wholesale and retailing	0.047
General transportation	0.047
Telecommunications	0.047

<sup>21</sup> Chow Kit Boey and Leo KahMun. (2005) *Economic Contribution of Copyright-Based Industries in Singapore*. IP Academy Singapore.

## 5. Contribution of Copyright Industries to the Ethiopian Economy

Different indicators can be used to measure the economic contribution of the copyright industry to a national economy. The guideline developed by the World Intellectual Property Organization (WIPO) in 2003 established a set of major indicators and laid out research standards and approaches. The indicators are contribution to GDP, employment, and foreign trade. The Ethiopian study, like previous national studies conducted in other countries, followed the approaches of the WIPO guide. The study year was 2012, which was selected because of the availability of most recent comprehensive data.

In 2012 the value added of the copyright industries in Ethiopia was 23,989,211,925 Birr. As a percentage of the Gross Domestic Product (GDP) at constant prices, this amounted to 4.73 per cent.<sup>22</sup> The copyright industries also provided jobs to 240,287 persons, which is 4.20 per cent of the population employed by the different economic sectors. With 0.65 per cent share in exports and 10.87 per cent share in imports, the copyright industries played an important role in Ethiopia's external trade. Total exports by the copyright industries amounted to 465,501,740 Birr, while the country imported 24,358,767,344 Birr worth of products and services of the copyright industry.

In 2012 the labor productivity index in Ethiopia for the copyright industries as a whole was 112.6.<sup>23</sup> The labor productivity index was the highest for the core copyright industries with a ratio of 143. In the interdependent and partial industries the ratios were 109 and 130, respectively. The lowest labor productivity index was observed in the non-dedicated copyright industries with a ratio of 77. The small figure for the non-dedicated support industries is a result of the labor-intensive nature of wholesale and retail trade activities in the country observed in the study. The non-dedicated support industries accounted for 29.25 per cent of the labor force in the copyright industries, while their share in the GDP contribution of the copyright industries was only 20.05 per cent.

**Table 8: Contribution of the Copyright Industries to the Ethiopian Economy in 2012**

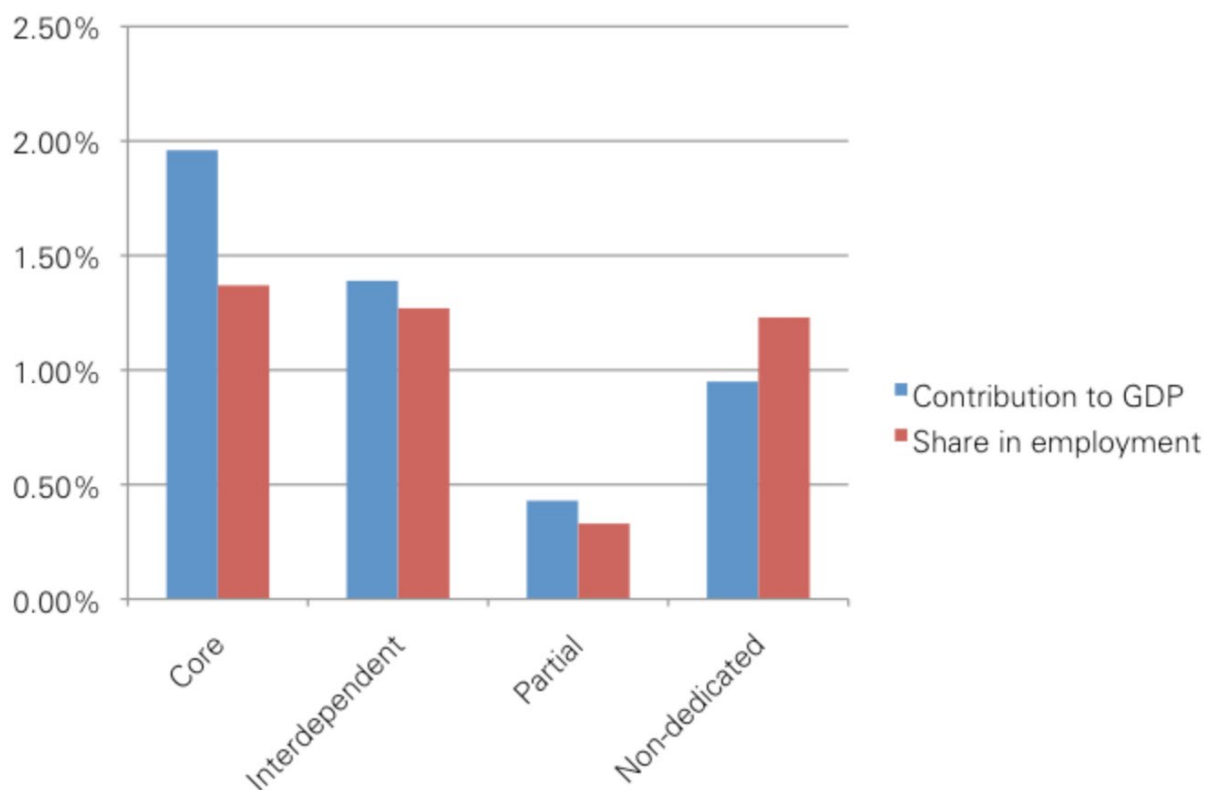
Sector	Gross value added (Birr)	As per cent of GDP	Employment		Foreign Trade	
			Number	Per cent	Export value (Birr)	Import value (Birr)
Core copyright industries	9,945,308,947	1.96	78,407	1.37	13,378,815	1,049,289,952
Interdependent copyright industries	7,061,467,096	1.39	72,725	1.27	226,506,900	22,874,288,505
Partial copyright industries	2,172,916,485	0.43	18,861	0.33	13,216,025	349,692,267
Non-dedicated support industries	4,809,519,397	0.95	70,294	1.23	212,400,000	85,496,620
Total for copyright industries	23,989,211,925	4.73	240,287	4.20	465,501,740	24,358,767,344
<b>Total for the economy</b>	<b>506,533,300,000</b>	<b>100</b>	<b>5,726,116</b>	<b>100</b>	<b>71,434,925,500</b>	<b>223,999,300,000</b>

Source: Authors' calculations based on data from MoFED and CSA.

<sup>22</sup> The constant price was calculated on a 2010/11 base year series.

<sup>23</sup> The labor productivity index can be calculated using contributions to GDP and employment. It is calculated as the proportion between the share of GDP and share of national employment attributed to copyright industries.

**Figure 1: Contribution to GDP and Share in Employment by Sector, 2012**



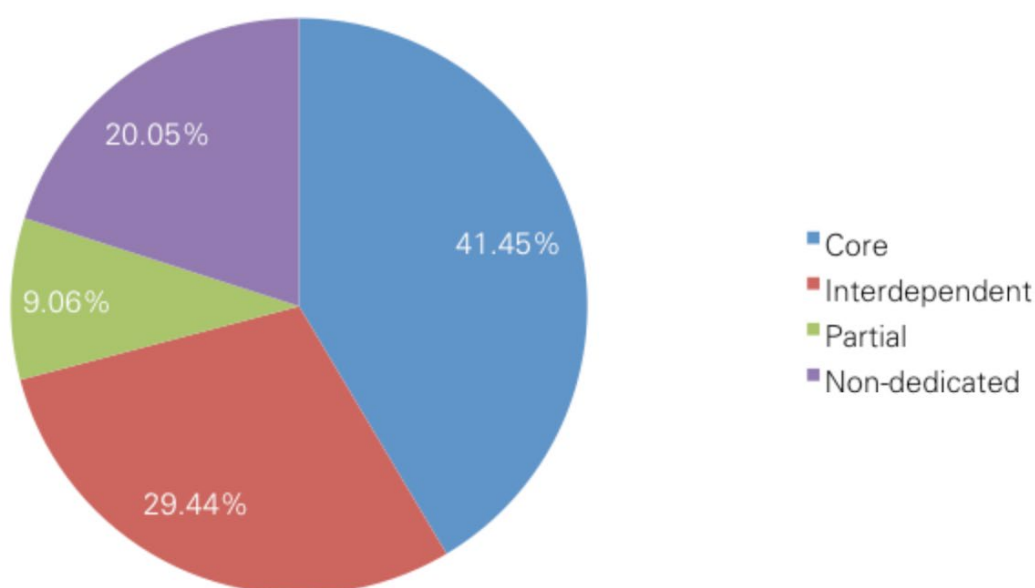
The core copyright industries constituted 41.45 per cent of the total contribution of the copyright industries to the GDP. Except in a handful of cases, many of the previous studies carried out in other countries showed that the core copyright industries accounted for more than half of the contribution of the copyright industries to the GDP. The low figure for Ethiopia may have resulted from the unavailability of data for three sub-sectors of the core copyright industry. The contributions of photography, visual and graphic arts, and collective management organizations could not be included in the estimations because of lack of data.

**Table 9: Share Contribution of the Copyright Industries to GDP in Ethiopia in 2012**

	Value in Birr	Per cent
Core copyright industries	9,945,308,947	41.45
Interdependent copyright industries	7,061,467,096	29.44
Partial copyright industries	2,172,916,485	9.06
Non-dedicated support industries	4,809,519,397	20.05
<b>Total for copyright industries</b>	<b>23,989,211,925</b>	<b>100</b>

Source: Authors' calculations based on data from MoFED and CSA.

**Figure 2: Share Contribution of the Copyright Industries to GDP in Ethiopia in 2012 (per cent)**



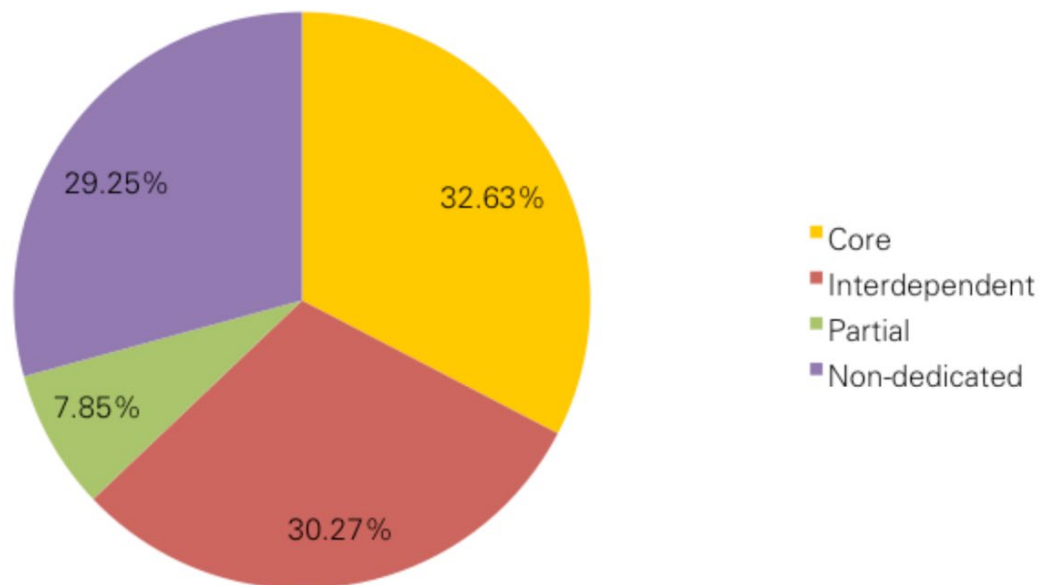
In terms of contribution to employment, the core copyright industries, which employed 78,407 persons, have the highest share (32.63 per cent), followed by the interdependent copyright industries, which employed 72,725 (30.27 per cent) of the manpower in the sector. The partial copyright industries and the non-dedicated support industries provided jobs for 18,861 and 70,294 people, representing 7.85 per cent and 29.25 per cent of the employment in the copyright industries, respectively.

**Table 10: Share Contribution of Copyright Industries to Employment in Ethiopia in 2012**

	Number of employees	Per cent
Core copyright industries	78,407	32.63
Interdependent copyright industries	72,725	30.27
Partial copyright industries	18,861	7.85
Non-dedicated support industries	70,294	29.25
<b>Total for copyright industries</b>	<b>240,287</b>	<b>100</b>

Source: CSA.

**Figure 3: Share Contribution of Copyright Industries to Employment in Ethiopia in 2012 (per cent)**



## 5.1 Contribution of Copyright Industries to GDP

In assessing the economic importance of industries, the most common measurement is value added or gross value added (GVA). Value added measures the contribution of a particular industry to a good or a service. It is defined as turnover (or production value) less the cost of all inputs from other industries. The sum of the GVA of all industries equals gross domestic product (GDP). GDP combines in a single figure, and with no double counting, all the output (or production) carried out by all the firms, non-profit institutions, government bodies, and households in a given country during a given period, regardless of the type of goods and services produced, provided that the production takes place within the country's economic territory.

The use of value added in economic impact studies provides a useful indicator of the wealth that an industry adds to the economy. Thus, the GVA of the copyright industries, as a percentage of the GDP, is used in this study as one of the indicators to measure their true contribution to the Ethiopian economy. The following sections provide a detailed discussion of the contribution of the different sectors of the copyright industry to the GDP of Ethiopia.

### 5.1.1 Core Copyright Industries

The core copyright industries had a total value of 9,945,308,947 Birr in 2012, which translates into 1.96 per cent of the GDP. Data obtained from various official sources showed that there is great variation between the sub-sectors of the core copyright industries in terms of their contribution to the GDP. In 2012, the three largest sub-sectors—press and literature; radio and television; and music, theatrical productions, and operas—accounted for 78.72 per cent of the total contribution of core copyright industries in terms of gross value added.

Motion picture and video contributed only 550,500,000 Birr<sup>24</sup> in 2012 to the country's GDP, constituting 5.54 per cent of the total share of the core copyright industries. This is a very low figure compared with the performances of other African countries, such as Nigeria and South Africa, with booming film industries. In Nigeria, Nollywood has taken a giant stride to become an industry to be reckoned with, both inside and outside the country. In just a few years, the industry has grown to become one of the largest film industries in the world, generating hundreds of millions of dollars per year for the Nigerian economy. South Africa also has a vibrant, growing film industry that is increasingly competitive internationally. Local and foreign filmmakers are taking advantage of the country's diverse, unique locations. The same can be said of the film

<sup>24</sup> The figure includes the value of video rental and sales of foreign movies.

industry of Burkina Faso, whose filmmakers are known internationally and have won international prizes. In Ethiopia some recent attempts are showing positive signs of the sub-sector's future. However, the Ethiopian film industry is suffering from a shortage of qualified personnel, and investors are not yet ready to make huge expenditure in the area. The poor marketing system of Ethiopian movies, which is controlled by a few groups, has also negatively impacted the growth of the sector. Much needs to be done to promote the country's film industry abroad, which has currently not received recognition outside of the Ethiopian diaspora.

The official data also revealed the current low level of development of Ethiopia's software industry. With 584,653,226 Birr, value added in 2012 software and databases accounted for only 5.88 per cent of the share of the core copyright industries. Out of this software, programming and consultancy accounted for 88,163,949 Birr, while the remaining balance, 496,489,277 Birr, is the contribution from database activities. Software is becoming more important for countries to build their competitiveness in different socio-economic activities. Software production and development can make meaningful contributions to the structural transformation of economies and improvement of the living standard of the people. It can boost learning, innovation, and job creation, especially for skilled youth. For instance the Indian software industry has brought about a tremendous success for the emerging economy. Presently there are hundreds of software companies in the country, which shows the monumental advancement that the Indian software industry has experienced. In many countries it is the pool of young manpower that is the key behind the success stories in the software industry. In this regard Ethiopia has great advantages and considerable room to improve its capability in the software industry and make better use of the potential. However, the current level of development of software companies in the country is unsatisfactory, and the potential benefits of the technology are underexploited in the economy. The new information and communication technology (ICT) park, Ethio ICT Village, which will be launched soon, is expected to bring about a noticeable change in the country's software industry. The major objectives of the ICT Park in Ethiopia are to foster the growth of the ICT sector in the country by providing a favorable environment for business, to develop ICT supported indigenous business entrepreneurs, and to provide employment opportunities for Ethiopians. Individuals and companies (local or foreign), public institutions, civic societies engaged in ICT, the Ethiopian diaspora, and foreigners who have investment permits to undertake business development activities in the ICT sector of Ethiopia are eligible to acquire space in the Ethio ICT Village.<sup>25</sup>

One of the sub-sectors under the core copyright industries comprises collective management organizations. Collective management organizations are also frequently called authors' societies and play an important and very useful role for authors, composers, and performers, as well as for users. The essential role of a collective management organization is to collect copyright fees and to distribute the appropriate amount to the copyright owners, after deducting the sum required to cover expenses, on a non-profit-making basis. Collective management organizations, acting on behalf of their members, negotiate rates and terms of use with users, issue licenses authorizing uses, and collect and distribute royalties. The Ethiopian Copyright and Related Rights Collective Management Society has not yet started actively discharging its role, and it was not possible to include data concerning its activities. Data problems have also been recognized in the area of photography and visual and graphic arts. The data from official sources do not show the value of outputs in these sub-sectors. Therefore, it was not possible to include information on these three sub-sectors of the core copyright industry in the survey.

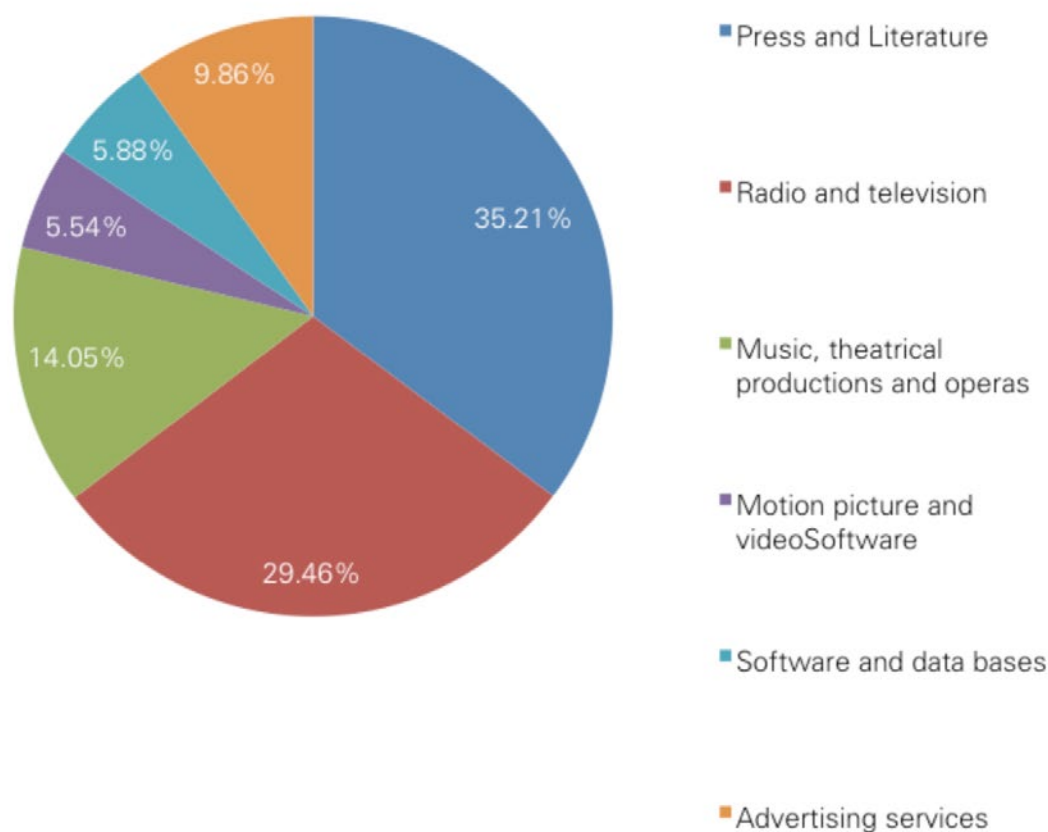
<sup>25</sup> [www.ethioictvillage.gov.et/index.php/about-ethio-ict-village/introduction](http://www.ethioictvillage.gov.et/index.php/about-ethio-ict-village/introduction).

**Table 11: Share Contribution of Various Sub-Sectors of Core Copyright Industries in 2012**

Economic activity	Value added (Birr)	Per cent
Press and literature	3,502,096,799	35.21
Radio and television	2,929,708,977	29.46
Music, theatrical production and operas	1,397,698,967	14.05
Motion picture and video	550,500,000	5.54
Software and databases	584,653,226	5.88
Advertising services	980,650,978	9.86
<b>Total for core copyright industries</b>	<b>9,945 308,947</b>	<b>100</b>
<b>Total for copyright industries</b>	<b>23,989,211,925</b>	
<b>Total for the economy</b>	<b>506,533,300,000</b>	

Source: Authors' calculations based on data from MoFED and CSA.

**Figure 4: Share Contribution of the Core Copyright Industries in 2012 by Sub-Sector (per cent)**



### 5.1.2 Interdependent Copyright Industries

Wholesale and retail trade constitutes a significant share of the interdependent copyright industries. Very few local enterprises in Ethiopia are engaged in the manufacturing of equipment required for the creation, production, or use of copyrighted material. Although there has been recent growth in investments for the assembly of such equipment, the local market is predominantly supplied by imports. There is heavy dependence on imports for TV sets, radios, computers and other office equipment, musical instruments,



photographic and cinematographic equipment and other equipment that fall under the interdependent copyright industries.

The first TV assembly plant was established in Ethiopia 15 years ago. The plant was producing 100 TV sets per day at its initial stage. However, the development in the sub-sector has not kept up the initial pace and the capacity building in the area has been very slow. Recently, there have been some signs of change that may strengthen the local manufacturing capacity of electronic products in the country. Prominent among these are the recent commencement of TV assembly by the Metal and Engineering Corporation of Ethiopia (MetEC) and the inauguration of the first printer assembly plant in Ethiopia, jointly owned by Tana Communications and Samsung Electronics Company. A hi-tech company was established as one of the companies under MeTEC in 2011. The company specializes in the manufacture of electronic and electromechanical technology, such as: the production and assembly of communication radios (both for military and commercial purposes), radar systems, cell phones, TVs, electromechanical devices such as energy meters, harmonic analyzers, optical devices such as night vision devices, thermal imagers, and security cameras. Tana communications is also a local company that uses Chinese technology to manufacture electronic products.

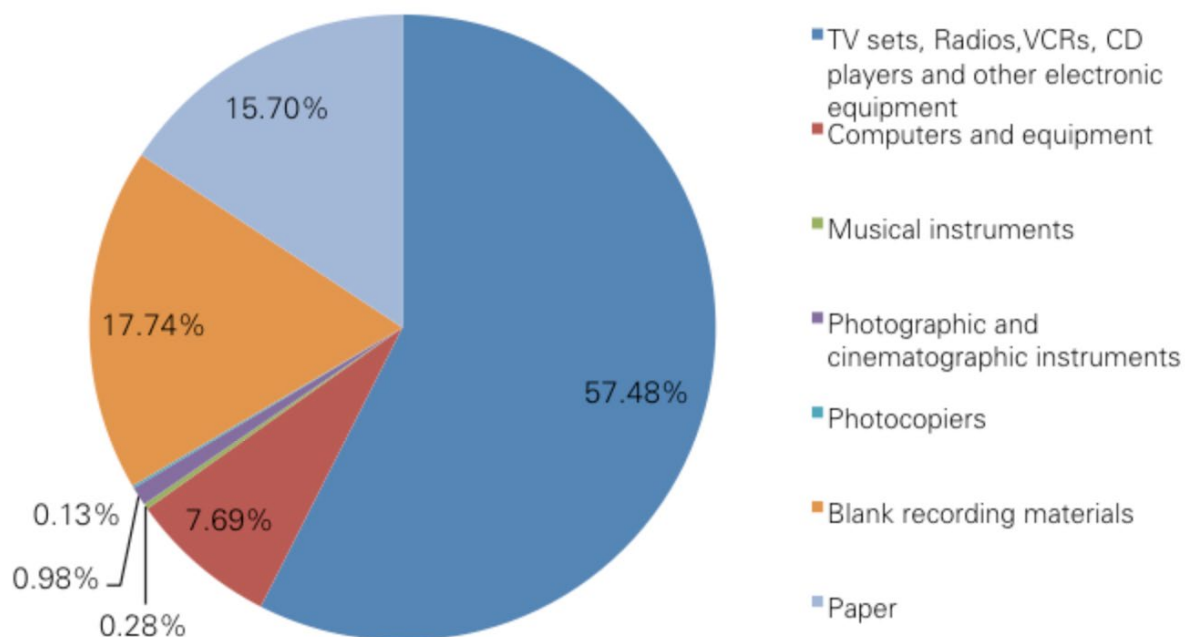
In terms of their share contribution in the group of interdependent industries, TV sets, radios, VCRs, CD players, DVD players, and other electronic equipment took the leading place with 57.48 per cent. Blank recording materials (17.74 per cent), paper (15.70 per cent), computers and equipment (7.69 per cent), photographic and cinematographic instruments (0.98 per cent), and musical instruments (0.28 per cent) follow in the order of their contribution to the sector. The lowest contribution in the sector came from photocopiers, which accounted for only 0.13 per cent. The group of interdependent industries together contributed 1.39 per cent of the GDP.

**Table 12: Economic Contribution of Interdependent Copyright Industries by Sub-Sector, 2012**

Economic activity	Value added (Birr)	Per cent
TV sets, radios, VCRs, CD players, DVD players, other electronic equipment	4,058,765,505	57.48
Computers and equipment	542,942,670	7.69
Musical instruments	19,654,786	0.28
Photographic and cinematographic instruments	69,480,339	0.98
Photocopiers	9,286,543	0.13
Blank recording materials	1,252,594,558	17.74
Paper	1,108,742,695	15.70
<b>Total for interdependent copyright industries</b>	<b>7,061,467,096</b>	<b>100</b>
<b>Total for copyright industries</b>	<b>23,989,211,925</b>	
<b>Total for the economy</b>	<b>506,533,300,000</b>	

Source: Authors' calculations based on data from MoFED and CSA.

**Figure 5: Value added of Interdependent Copyright Industries in 2012 by Sub-Sector (per cent)**



### 5.1.3 Partial Copyright Industries

In the partial copyright industries, only a portion of the activities is related to copyright works and connected subject matter. It is therefore necessary to include only that part which is attributable to copyright works. This can be done by adjusting the values by copyright factors. The copyright factors for the partial copyright industries are given in Table. 7. This makes the contribution of these industries to copyright value added low. The copyright factors for the partial copyright industries in Ethiopia range from 4.5 per cent for furniture to 50 per cent in the case of museums.

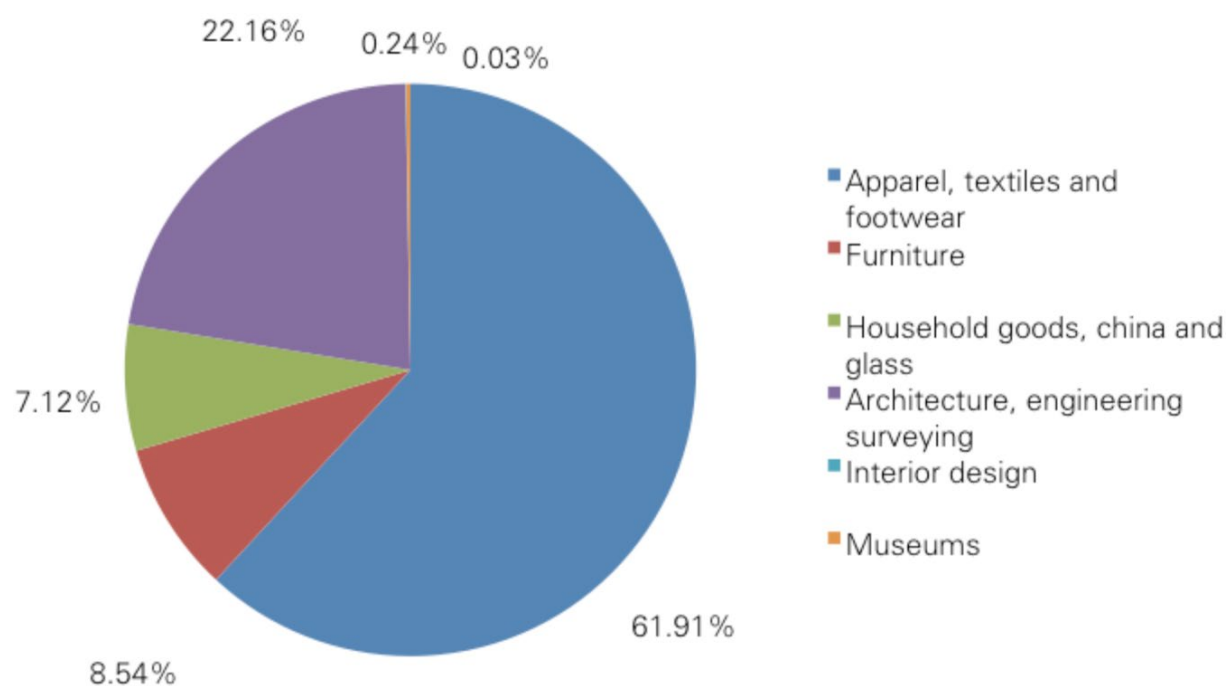
The value added of the partial copyright industries in 2012 after applying the copyright factor was 2,172,916,485 Birr. This represented 0.43 per cent of the country's GDP. Apparel, textiles and footwear accounted for 61.91 per cent of the sub-sector's contribution to the GDP. Ethiopia's footwear industry and its leather sector in general enjoy significant international comparative advantages, owing to abundant and available raw materials and cheap prices. Similarly, Ethiopia has all the essential ingredients for a competitive textile industry: raw materials, low wages, and low energy costs. This gives the country a competitive advantage over many other countries. However, the current contribution of the sector to the national economy is far less than its potential. The second place in the partial copyright industries was taken by architecture, engineering and surveying (22.16 per cent), followed by furniture (8.54 per cent) and household goods, china, and glass (7.12 per cent). The contribution of museums to the GDP was disappointingly low. Although Ethiopia has a long history and rich tradition, the economic potential of museums in particular and the tourism sector in general is underexploited. The share of museums in the partial copyright industries in 2012 was 0.24 per cent. The lowest contribution among the sub-sectors in the partial copyright industry came from interior design (0.03 per cent). It was not possible to get data on jewelry and coins, wall coverings and carpets, and toys and games. This obviously undervalued the contribution of the partial copyright industries to the GDP.

**Table 13: Economic Contribution of Partial Copyright Industries by Sub-Sector, 2012**

Economic activity	Value added (Birr)	Per cent
Apparel, textiles and footwear	1,345,234,672	61.91
Furniture	185,558,919	8.54
Household goods, china and glass	154,661,373	7.12
Architecture, engineering, surveying	481,504,148	22.16
Interior design	711,982	0.03
Museums	5,245,391	0.24
<b>Total for partial copyright industries</b>	<b>2,172,916,485</b>	<b>100</b>
<b>Total for copyright industries</b>	<b>23,989,211,925</b>	
<b>Total for the economy</b>	<b>506,533,300,000</b>	

Source: Authors' calculations based on data from MoFED and CSA.

**Figure 6: Value added of Partial Copyright Industries in 2012 by Sub-Sector (per cent)**



#### 5.1.4 Non-dedicated Support Industries

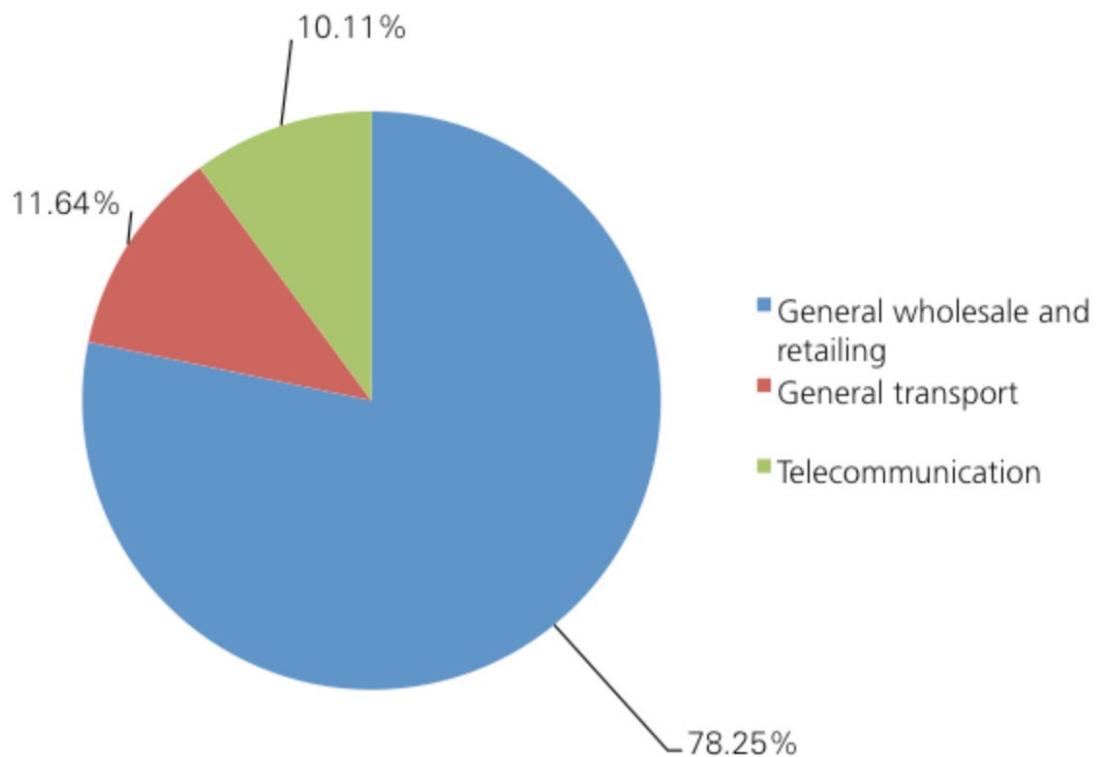
Non-dedicated support industries stem from backward linkages and generally refer to business services and delivery modes. The functions in these industries are shared between copyright industries and other sectors of the economy. As in the case of the partial copyright industries, only a limited portion of these industries is taken into account in estimating the economic contribution of the copyright industries. Therefore, the values of the different activities in this industry are reduced by the copyright factor to single out the proportion attributable to copyright. These industries include: general wholesale and retailing, general transportation, and telecommunication. Out of the contribution of the non-dedicated support industries in 2012, which was 4,809,519,397 Birr, 78.25 per cent was accounted for by general wholesale and retailing. General transport and telecommunication contributed 11.64 per cent and 10.11 per cent of the sub-sector's share, respectively. The share of non-dedicated industries in the country's GDP was 0.95 per cent.

**Table 14: Economic Contribution of Non-dedicated Support Industries by Sub-Sector**

Economic activity	Value added after applying the copyright factor	Per cent
Wholesale and retail trade	3,763,503,513	78.25
General transport	559,915,559	11.64
Telecommunication	486,100,325,	10.11
<b>Total for non-dedicated industries</b>	<b>4,809,519,397</b>	<b>100</b>
<b>Total for copyright industries</b>	<b>23,989,211,925</b>	
<b>Total for the economy</b>	<b>506,533,300,000</b>	

Source: Authors' calculations based on data from MoFED and CSA.

**Figure 7: Value Added of Non-Dedicated Support Industries in 2012 by Sub-Sector (per cent)**



## 5.2 Contribution of the Copyright Industries to Employment

Estimation of the contribution of the copyright industries to employment is based on the Urban Employment and Unemployment Survey conducted by CSA in 2012. The survey covered all urban parts of the country except nine zones where the residents are pastoralists. The result showed that a total of 5,726,116 persons were employed by the various economic sectors in the urban areas covered by the survey. Out of these, 240,287 employees worked in the copyright industries, accounting for 4.20 per cent of the total employment. In terms of contribution to total employment, the share of the core copyright industries, employing 78,407, was the highest (1.37 per cent). The next place was taken by the interdependent copyright industries, with 72,725 (1.27 per cent) of the manpower in the sector. The partial copyright industries and the non-dedicated support industries provided jobs for 18,861 and 70,294 people, representing 0.33 per cent and 1.23 per cent, respectively, of the total employment figure.

The total income earned by persons employed by the copyright industry was 3,144,389,544 Birr. The largest share was that of employees in the core copyright industries, which amounted to 1,181,656,216 Birr. Employee incomes in the interdependent, partial, and non-dedicated support industries were 901,688,160 Birr, 229,766,552 Birr, and 831,278,616 Birr, respectively.

**Table 15: Contribution of the Copyright Industries to Total Employment and Employee Income**

	Number of employees		Employee income (Birr)
	Number	Per cent	
Core copyright industries	78,407	1.37	1,181,656,216
Interdependent copyright industries	72,725	1.27	901,688,160
Partial copyright industries	18,861	0.33	229,766,552
Non-dedicated support industries	70,294	1.23	831,278,616
<b>Total for copyright industries</b>	<b>240,287</b>	<b>4.20</b>	<b>3,144,389,544</b>

Source: CSA, Urban Employment-Unemployment Survey Report (2012).

### 5.2.1 Core Copyright Industries

Within the core copyright sector, the largest share (50.91 per cent) is held by press and literature. Software and databases, motion picture, video, radio, and television together accounted for 41.09 per cent of the employment in the sub-sector. In the software and database sub-sector, 11,053 persons (63 per cent) are engaged in data processing and database activities and only 6,394 professionals (37 per cent) work in software programming and consultancy. The very low number of employees engaged in music, theatrical productions, and operas is due to lack of data for most of the economic activities in the sub-sector. The 220 employees indicated in Table 16 are only those engaged in reproduction of recorded media.

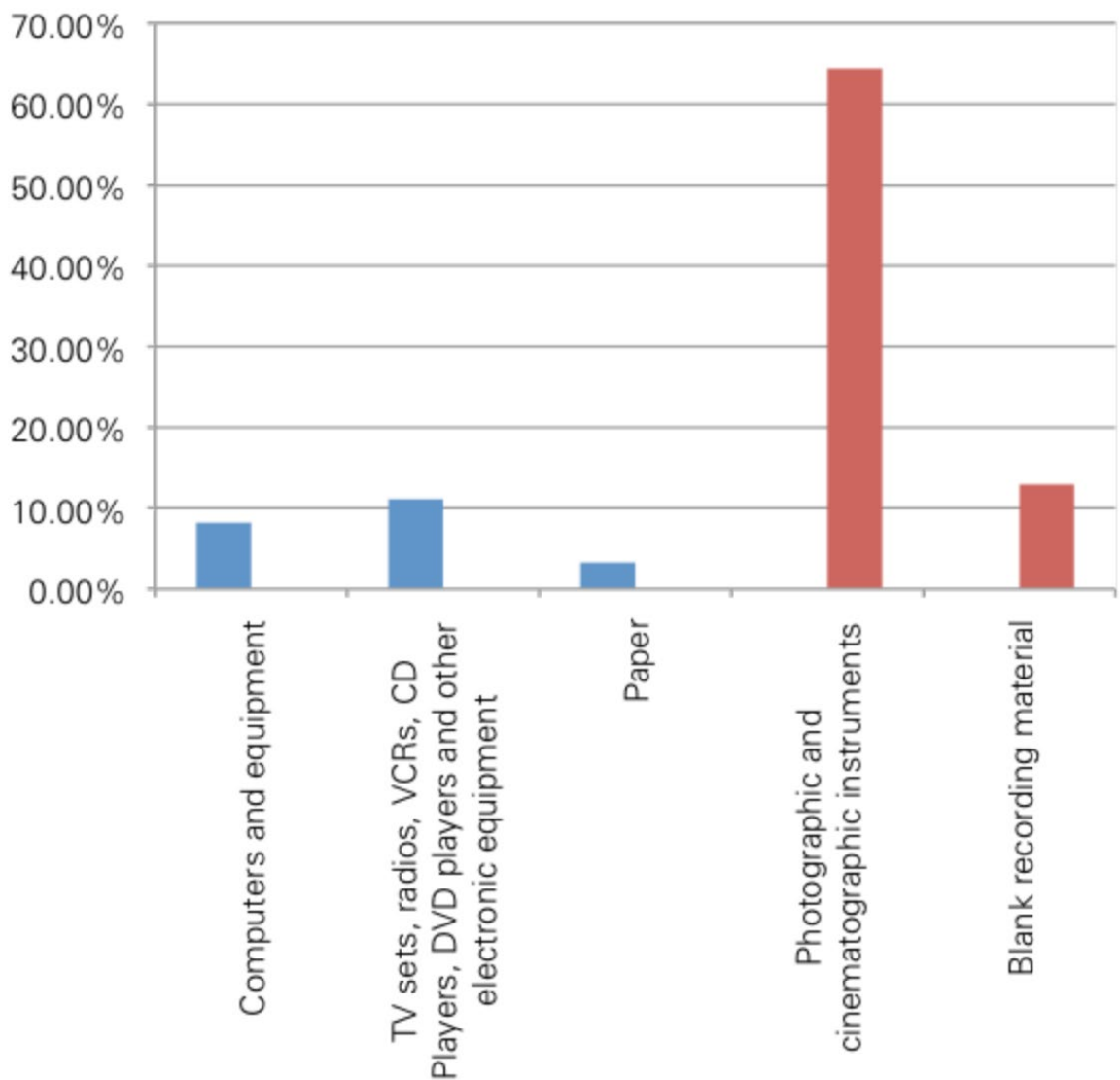
**Table 16: Share Contribution of the Core Copyright Industries to Total Employment and Employee Income by Sub-Sector**

	Number of employees		Employee income (Birr)
	Number	Per cent	
Press and literature	39,916	50.91	601,566,053
Music, theatrical productions, operas <sup>26</sup>	220	0.28	3,315,576
Software and databases	17,447	22.25	262,940,248
Advertising	6,056	7.72	91,268,765
Motion picture and video	2336	2.98	35,165,361
Radio and television	12,432	15.86	187,400,213
<b>Total for core copyright industries</b>	<b>78,407</b>	<b>100</b>	<b>1,181,656,216</b>
<b>Total for copyright industries</b>	<b>240,287</b>		

Source: CSA, Urban Employment-Unemployment Survey Report (2012).

<sup>26</sup> The figure indicates only employees engaged in reproduction of recorded media.

**Figure 8: Employment in the Core Copyright Industries by Sub-Sector in 2012 (per cent)**



### 5.2.2 Interdependent Copyright Industries

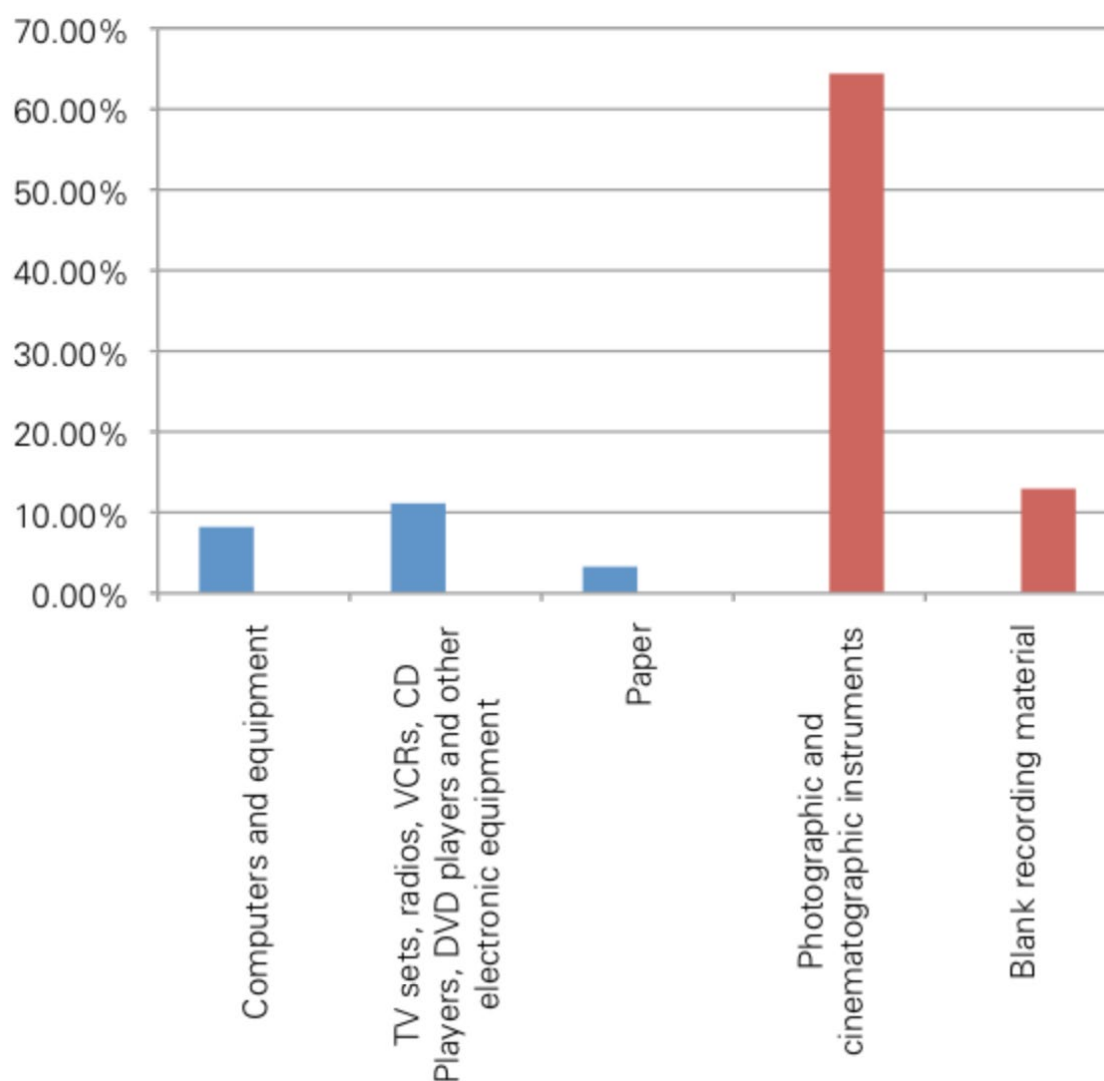
Based on their contribution to employment, photographic and cinematographic instruments rank first in the group of interdependent copyright industries. This represents 64.42 per cent of the employees in the group. The sub-sector is dominated by wholesale activities, reflecting the weak production capability in the sector. The low level of technological capability of the country in the electronics sector has negatively affected the capacity to manufacture equipment for the creation, production and manufacturing of copyright works. Very few enterprises are engaged in the assembly of products in the sector.

**Table 17: Share Contribution of the Interdependent Copyright Industries to Employment by Sub-sector**

	Number of employees		Employee income (Birr)
	Number	Per cent	
Computers and equipment	5,971	8.21	111,665,573
TV sets, radios, VCRs, CD players, DVD players, cassette players, electronic game equipment, and other similar equipment	8,104	11.14	154,513,910
Paper	2,384	3.28	29,111,501
Photographic and cinematographic instruments	46,852	64.42	491,439,998
Blank recording material	9,414	12.95	114,957,178
<b>Total</b>	<b>72,725</b>		<b>901,688,160</b>

Source: CSA, Urban Employment-Unemployment Survey Report (2012).

**Figure 9: Employment in the Interdependent Copyright Industries by Sub-Sector in 2012 (per cent)**



### 5.2.3 Partial Copyright Industries

Unlike in the case of core and interdependent copyright industries, activities of employees in the partial copyright industries are not taken as fully copyright-related. In order to determine the proportion of copyright-related activities of the personnel working in the sector, copyright factors are applied. Therefore, in the following discussion the numbers of employees in each sub-sector are adjusted figures.

Employment data in the partial copyright industries were obtained for manufacturing of apparel, textiles and footwear; manufacture of furniture; household goods, china, and glass; and architectural, engineering, and other technical activities and museums. The total number of people employed in the sub-sector in 2012 after adjustment by copyright factor was 18,861.

Apparel, textiles, and footwear, which employed 11,543 people after adjustment, ranked top in the sector of partial copyright industries with a share of 61.20 per cent. Architectural, engineering, and other technical activities, which have more than a 90 per cent contribution to the GDP compared to museums, employed less than half the number of people engaged in the same sub-sector. This shows the high productivity of architectural and engineering activities.

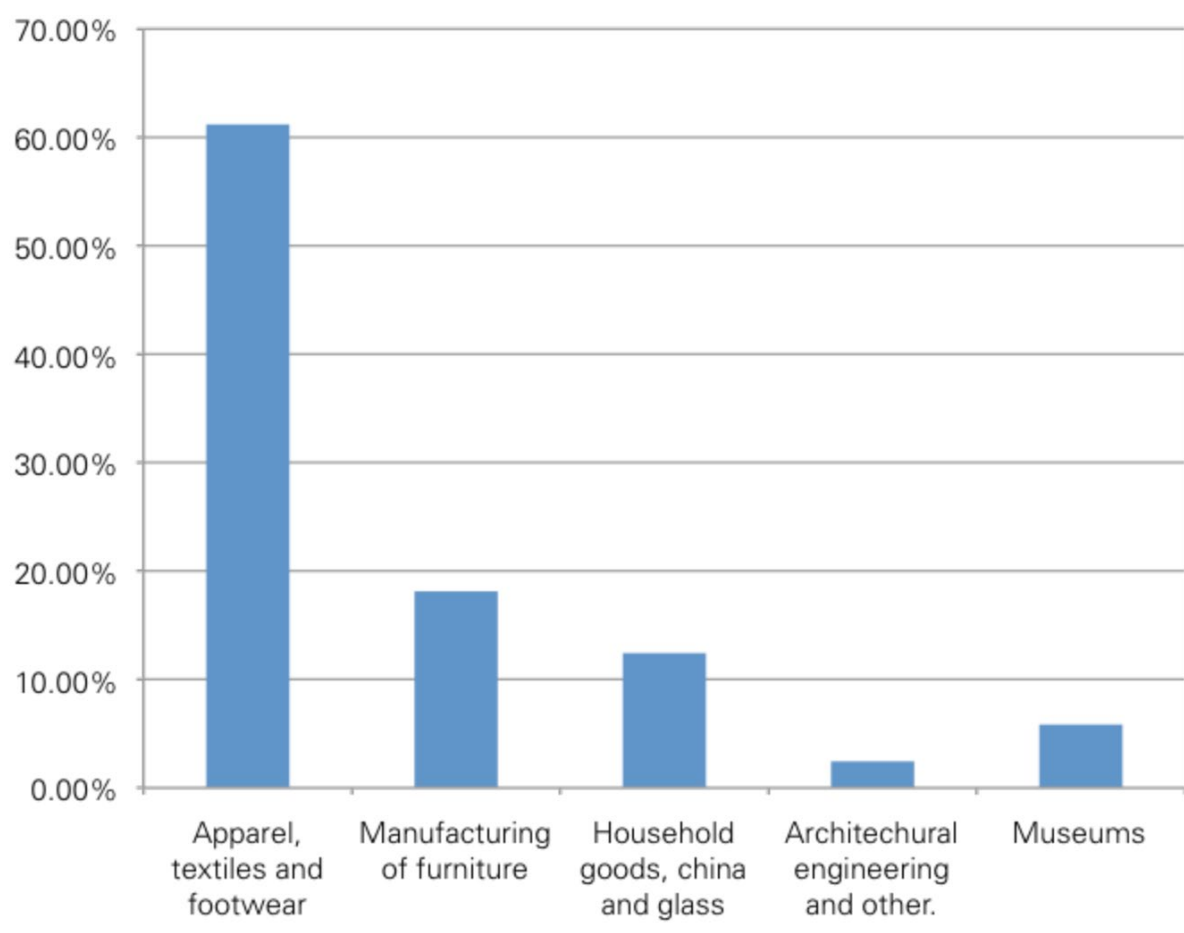
**Table 18: Share Contribution of the Partial Copyright Industries to Employment by Sub-sector**

	Number of employees after applying copyright factor		Employee income (Birr)
	Number	Per cent	
Apparel, textiles and footwear	11,543	61.20	140,953,882
Manufacture of furniture	3,418	18.12	41,737,882
Household goods, china, and glass	2,342	12.42	28,232,294
Architectural, engineering, and other technical activities	458	2.43	7,441,654
Museums	1,100	5.83	11,400,840
	<b>18,861</b>		<b>229,766,552</b>

Source: CSA, Urban Employment Unemployment Survey Report (2012).



**Figure 10: Employment in the Partial Copyright Industries by Sub-sector in 2012 (per cent)**



#### 5.2.4 Non-dedicated Support Industries

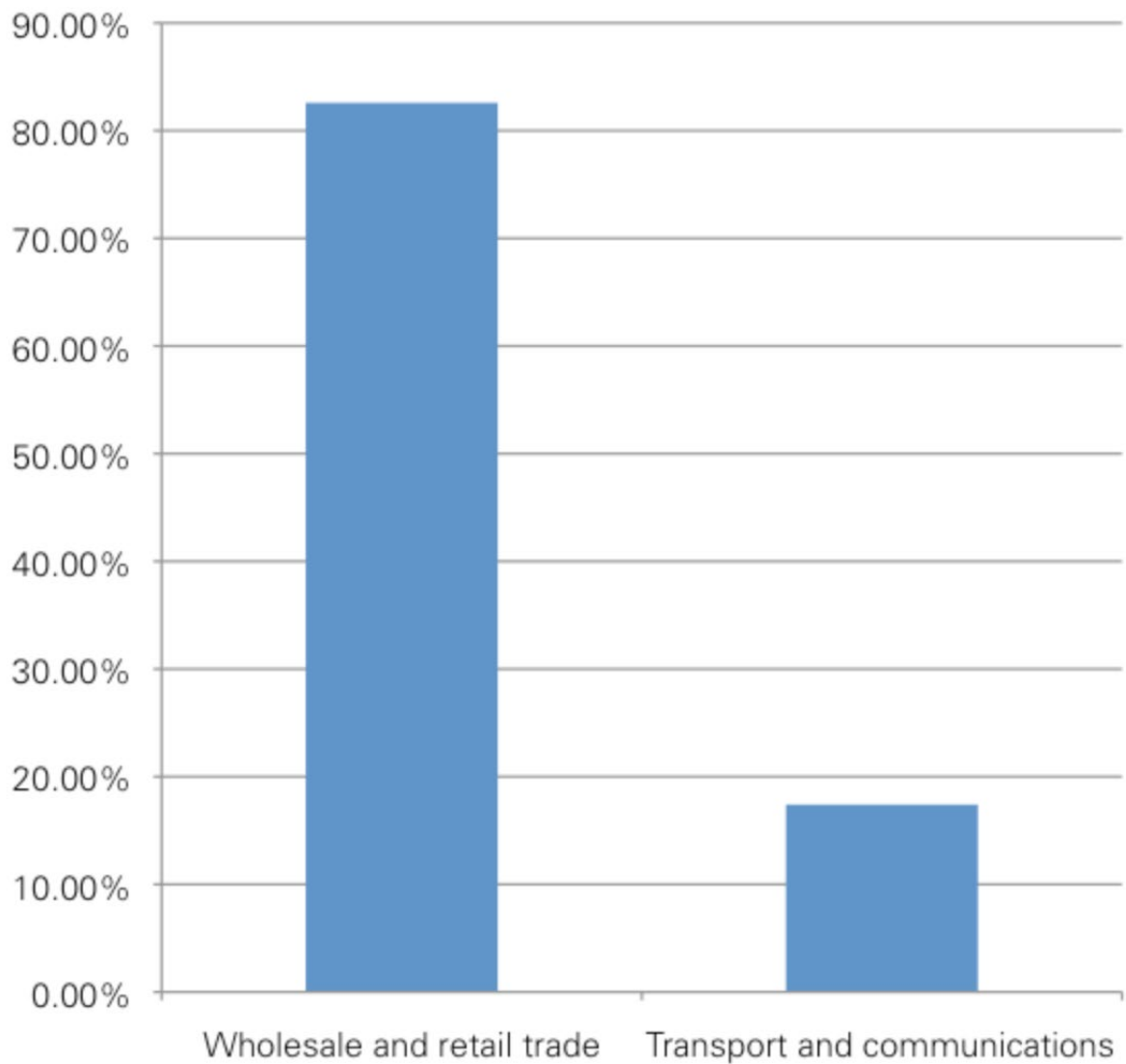
The activities in the non-dedicated support industries are service-based activities that provide support to the creation, manufacture, and dissemination of products of copyright industries. The group contributed 34.10 per cent of the employment in the copyright industries. The sub-sector that took the preponderant share of non-dedicated industries was wholesale and retail trade, with an 82.59 per cent contribution. The data from CSA on employment in transport and communication is reported together, and the research team could not get additional data to separate the data for the two sub-sectors. Therefore, the employment data for transport and telecommunication is presented in its merged form.

**Table 19: Contribution of Non-dedicated Support Industries to Employment**

	Number of employees		Employee income (Birr)
	Number	Per cent	
Wholesale and retail trade	58,057	82.59	608,971,484
Transport storage and communications	12,237	17.41	222,307,132
<b>Total</b>	<b>70,294</b>	<b>100</b>	<b>831,278,616</b>

Source: CSA, Urban Employment-Unemployment Survey Report (2012).

**Figure 11: Contribution of Non-dedicated Support Industries to Employment by Sub-Sector in 2012 (per cent)**



### 5.3 External Trade

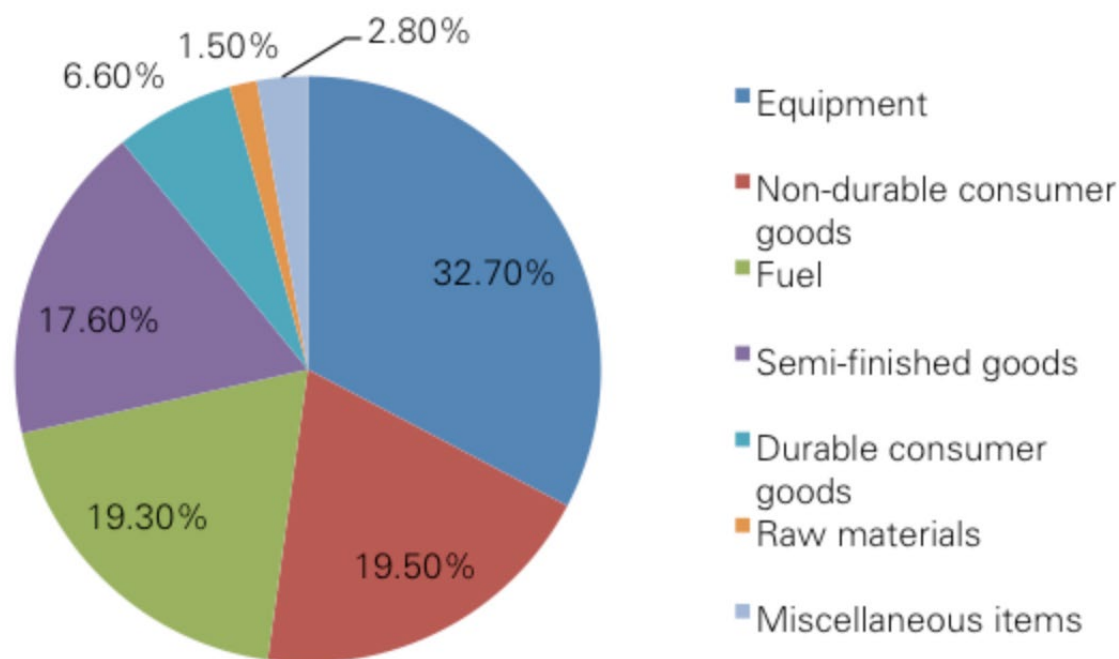
Ethiopia's exports are dominated by agricultural products, which provide about 70 per cent of the country's foreign exchange earnings. The country's export structure is characterized by greater commodity concentration with coffee accounting for a very large share, followed by oilseeds, pulses, spices, and hides and skins. This shows that the manufacturing and service sectors, to which the copyright industries belong, contribute a small share of Ethiopia's export trade. The structure of imports in 2012 shows that 32.7 per cent was accounted for by equipment. Other major import items were non-durable consumer goods (19.5 per cent), fuel (19.3 per cent), and semi-finished goods (17.6 per cent).

**Table 20: Structure of Imports in 2012**

Imported item	Per cent share in total imports
Equipment	32.7
Non-durable consumer goods	19.5
Fuel	19.3
Semi-finished goods	17.6
Durable consumer goods	6.60
Raw materials	1.50
Miscellaneous	2.80
<b>Total</b>	<b>100</b>

Source: CSA

**Figure 12: End-Use Classification of Imports**



Ethiopia's external trade statistics for the year 2012 show that total exports were valued at 71,434,925,500 Birr and the country's imports amounted to 223,999,300,000 Birr. The country's trade balance for the year showed a deficit of 152,564,374,500 Birr. In 2012, copyright exports were valued at 465,501,740 Birr, which was 0.65 per cent of total exports. Total copyright product imports were 24,358,767,344 Birr, accounting for 10.87 per cent of total imports.

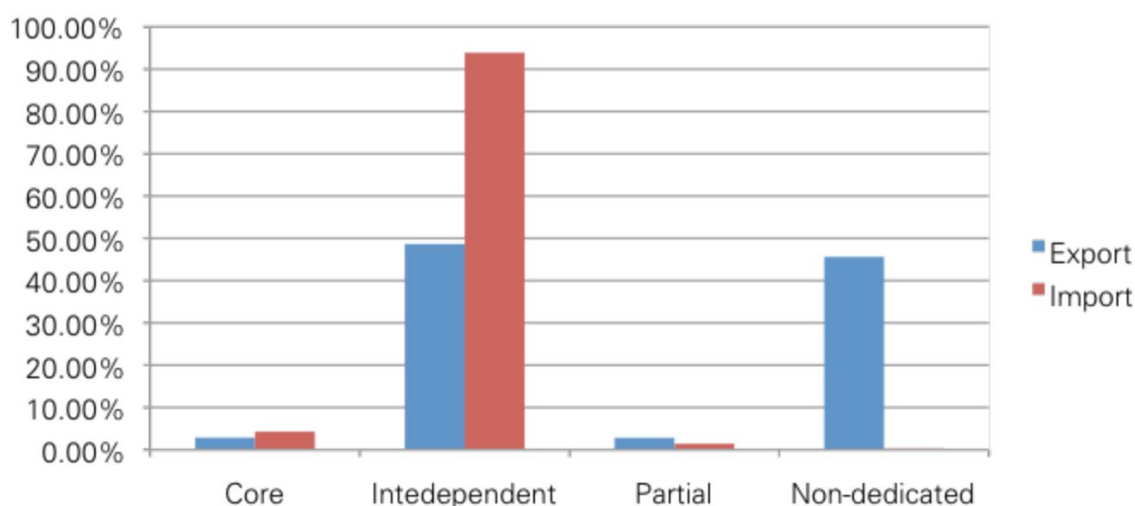
It can be seen from the data that the largest share of copyright exports came from the interdependent industries, which accounted for 48.66 per cent. However, the value of imports in the sector was significantly higher than the value of exports. The core copyright industries, with an export value of 13,378,815 Birr, accounted for only 2.87 per cent of total copyright exports. In the non-dedicated industries the export value amounted to 212,400,000 Birr and came mainly from scheduled air transport.

**Table 21: Contribution of the Copyright Industries to Foreign Trade in 2012**

Copyright Industries	Import	Per cent	Export	Per cent
Core	1,049,289,952	4.30	13,378,815	2.87
Interdependent	22,874,288,505	93.91	226,506,900	48.66
Partial	349,692,267	1.44	13,216,025	2.84
Non-dedicated	85,496,620	0.35	212,400,000	45.63
<b>Total for copyright industries</b>	<b>24,358,767,344</b>	<b>100</b>	<b>465,501,740</b>	<b>100</b>
<b>Total for the economy</b>	<b>223,999,300,000</b>		<b>71,434,925,500</b>	

Source: Authors' calculations based on data from Ethiopian Revenues and Customs Authority (ERCA) and CSA.

**Figure 13: Relative Shares of the Copyright Industries in Imports and Exports in 2012 (per cent)**



Since data on royalties and license fees were not presented in the official statistics, it was not possible to separately indicate such information in the trade data.

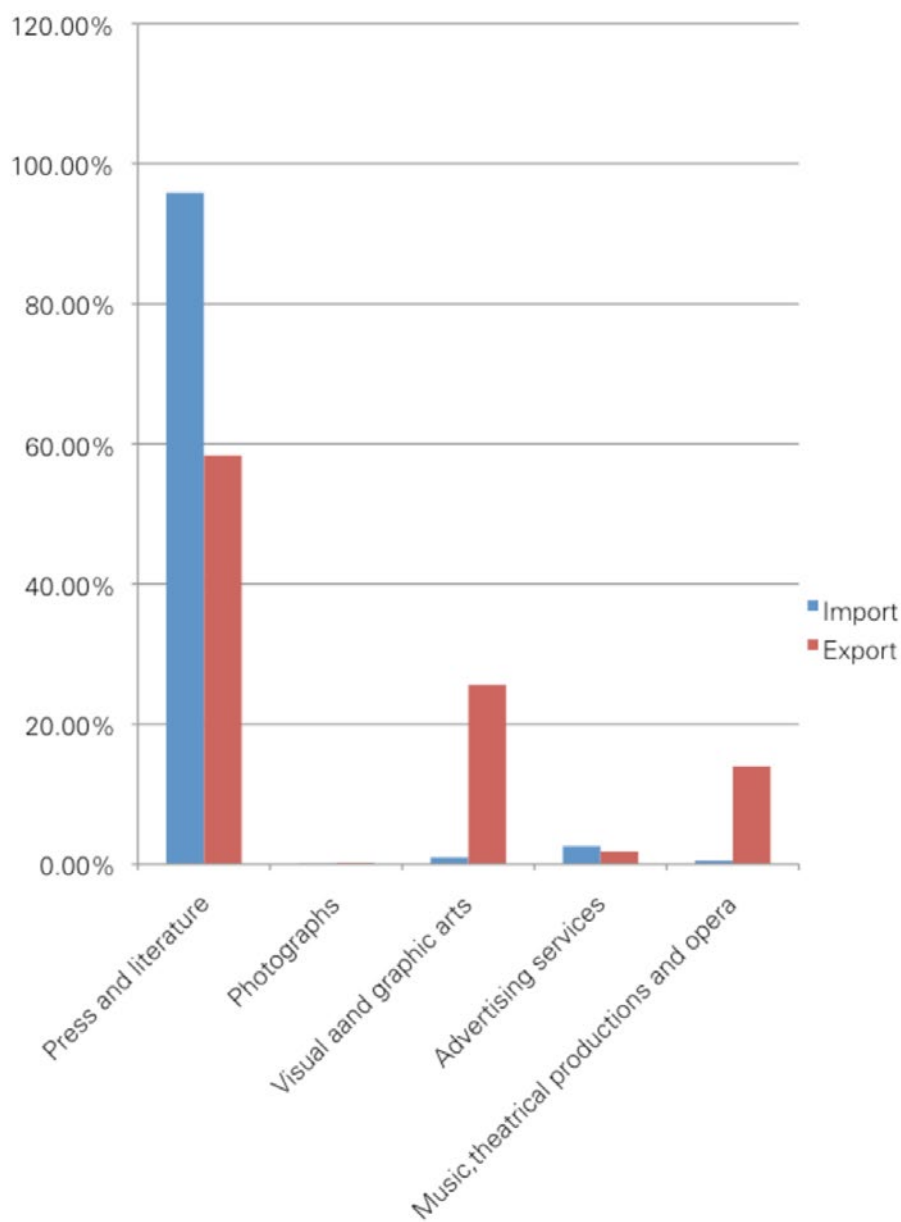
In the core copyright industries, printed books, newspapers, pictures, and other products of the printing industry (press and literature) took the leading place in terms of both import and export values, with 1,005,767,200 Birr and 7,809,600 Birr, respectively. This constituted 95.85 per cent and 58.37 per cent of the import and export values of the core copyright industries. The export of music, theatrical productions, and opera has a value of only 1,873,000 Birr. The low export figure, especially in the case of music, may be due to the nature of trade in the sector. Music trade is recorded in imports and exports of physical products by countries, principally sound recordings ready for sale to consumers. However, most records are shipped not in final form but in the form of masters that are then pressed locally for domestic retail distribution. Hence, much of the trade, in the sense of payment for musical product, occurs in the form of rights income flowing between countries. In the case of Ethiopia the external trade statistics do not capture payment for rights. Thus, it is difficult to evaluate the volumes and values of imports and exports of music. However, it should also be taken into consideration that Ethiopian music is not well-known abroad except among the Ethiopian diaspora.

**Table 22: Import and Export Values of Core Copyright Industries in 2012 by Sub-sector**

	Import		Export	
	Birr	Per cent	Birr	Per cent
Press and literature	1,005,767,200	95.85	7,809,600	58.37
Photography	982,668	0.09	28,394	0.21
Visual and graphic arts	10,158,436	0.97	3,422,840	25.58
Advertising services	27,191,346	2.59	244,981	1.83
Music, theatrical productions, and opera	5,190,302	0.50	1,873,000	14.00
<b>Total for core copyright industries</b>	<b>1,049,289,952</b>	<b>100</b>	<b>13,378,815</b>	
<b>Total for copyright industries</b>	<b>24,358,767,344</b>		<b>465,501,736</b>	
<b>Total for the economy</b>	<b>223,999,300,000</b>		<b>71,434,925,500</b>	

Source: Authors' calculations based on data from ERCA and CSA.

**Figure 14: Relative Share of Activities in the Core Copyright Industries in Imports and Exports, 2012**



The total export value of the core copyright industries constitutes only 0.02 per cent of total national exports. This indicates the need for a very strong effort to improve the sub-sector's export performance. Given the fact that the activities in the group of core copyright industries are the principal sources of pure copyright activities and creative industries, it is important to give serious attention to the issue. The pure copyright-related activities are important since they are closely related to creativity and originality in the arts and creative works.

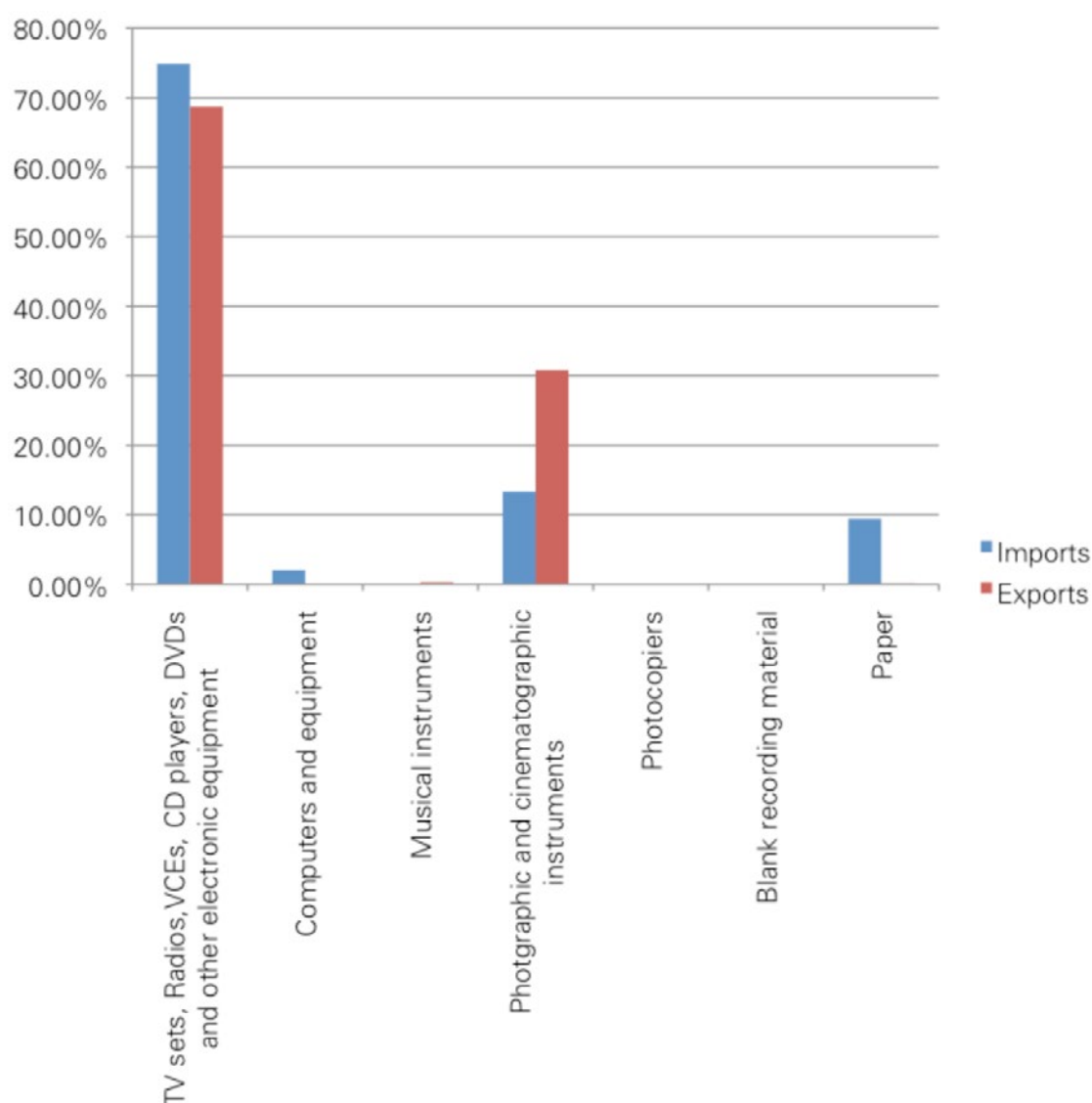
**Table 23: Import and Export Values for Sub-sectors of Interdependent Copyright Industries in Ethiopia, 2012**

	Import		Export	
	Birr	Per cent	Birr	Per cent
TV sets, radios, VCRs, CD players, DVD players, cassette players, electronic games equipment, and other similar equipment	17,124,755,794	74.86	155,588,900	68.69
Computers and equipment	468,249,516	2.05	–	–
Musical instruments	25,714,000	0.11	700,400	0.31
Photographic and cinematographic instruments	3,051,862,500	13.34	69,843,600	30.84
Photocopiers	16,743,468	0.07	-	-
Blank recording material	26,356,506	0.12	–	–
Paper	2,160,606,721	9.45	374,000	0.16
<b>Total for interdependent copyright industries</b>	<b>22,874,288,505</b>	<b>100</b>	<b>226,506,900</b>	<b>100</b>
<b>Total for copyright industries</b>	<b>24,358,767,344</b>		<b>465,501,736</b>	
<b>Total for the economy</b>	<b>223,999,300,000</b>		<b>71,434,925,500</b>	

Source: Authors' calculations based on data from Ethiopian Revenues and Customs Authority (ERCA) and CSA.

The imports of the interdependent copyright industries, which are a hundred times higher than the exports, show the large dependence of the country on foreign equipment for the production, dissemination, and use of works and other protected subject matter. The difference is more pronounced in the area of TV sets, radios, VCRs, CD players, DVD players, cassette players, electronic game equipment, and other similar equipment, which are essential for the crucial core copyright activities. Imports in these areas account for 74.86 per cent of the import value of interdependent copyright industries. Musical instruments, photocopiers, and blank CDs account for only 0.3 per cent of imports in the group. The import of computers and equipment was valued at 468,249,516 Birr, which is a very low figure for a country like Ethiopia with a large population. The weak production capacity of electronic products in Ethiopia, coupled with the small software industry, is a clear indication of the underdeveloped ICT sector in the country.

**Figure 15: Relative Share of Activities in the Interdependent Copyright Industries in Imports and Exports, 2012**



**Table 24: Import and Export Values for Sub-sectors of Partial Copyright Industries in Ethiopia, 2012**

	Imports		Export	
	Birr	Per cent	Birr	Per cent
Textiles, apparel, and footwear	45,916,472	13.13	7,714,455	58.37
Furniture	266,067,495	76.09	5,430,420	41.09
Household goods, china, and glass	37,708,300	10.78	71,150	0.54
<b>Total for partial copyright industries</b>	<b>349,692,267</b>	<b>100</b>	<b>13,216,025</b>	<b>100</b>
<b>Total for copyright industries</b>	<b>24,358,767,344</b>		<b>465,501,736</b>	
<b>Total for the economy</b>	<b>223,999,300,000</b>		<b>71,434,925,500</b>	

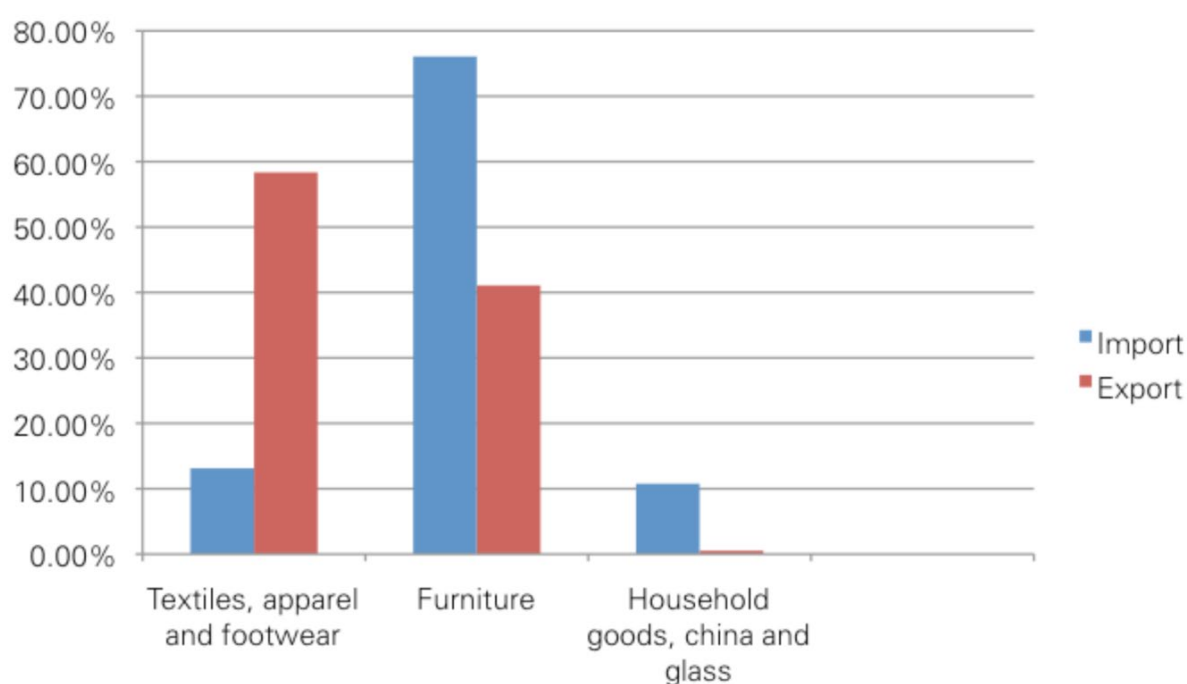
Source: Authors' calculations based on data from Ethiopian Revenues and Customs Authority (ERCA) and CSA.

In 2012 Ethiopia's imports in the partial copyright industries were dominated by the furniture sub-sector, with a total value of 266,067,495 Birr. On the other hand, the top ranking sub-sector in export was apparel textiles and footwear, whose export value amounted to 7,714,455 Birr. In recent years, the export performance of the textile industry in Ethiopia has gradually increased by more than 50 per cent per annum on average.

With the current increasing trend of investment in the textile sector and the interest shown by international retailers to buy more Ethiopian textiles, it is expected that Ethiopia's export performance in the sub-sector will show significant improvement.

A similar trend is observed in the export of shoes from Ethiopia. Because of its fine leather and commitment to top quality, Ethiopia has recently become a magnet for international retailers seeking high-end shoes. Between 2011 and 2012, Ethiopian shoe exports through the African Growth and Opportunity Act (AGOA) increased more than tenfold. The exports also go to the regional market in Africa.

**Figure 16: Relative Share of Activities in the Partial Copyright Industries in Imports and Exports, 2012**



**Table 25: Import and Export Values for Sub-sectors of Non-Dedicated Support Industries in Ethiopia, 2012**

	Import	Export
General transport	85,496,620	212,400,000
<b>Total for non-dedicated copyright industries</b>	<b>85,496,620</b>	<b>212,400,000</b>
<b>Total for copyright industries</b>	<b>24,358,767,344</b>	<b>465,501,736</b>
<b>Total for the economy</b>	<b>223,999,300,000</b>	<b>71,434,925,500</b>

Source: Authors' calculations based on data from Ethiopian Revenues and Customs Authority (ERCA) and CSA.

## 5.4 Balance of Trade

Except in the non-dedicated industries, the value of imports in the copyright industries far exceeds the value of exports. As can be seen from the table, the trade deficit is highest in the interdependent copyright industries, which registered a negative trade balance of 22,647,781,605 Birr in 2012. This is a direct reflection of the current low level of technological capacity in Ethiopia to manufacture electronic equipment, which falls under interdependent copyright industries.

In the core copyright industries, the value of imports exceeds that of exports by 1,035,911,137 Birr, demonstrating a large trade deficit. The value of imports in the partial copyright industries was 349,692,267 Birr, while the exports of the sub-sector were valued at 13,216,025 Birr. The balance of trade in this area was also negative, contributing to the deficit in the overall balance of trade for copyright industries. The trade deficit



for copyright industries as a whole in 2012 was 23,893,265,604 Birr, while the trade balance for the national economy as a whole showed a deficit of 152,564,374,500 Birr.

**Table 26: Ethiopia's Balance of Trade in Copyright Industries, 2012**

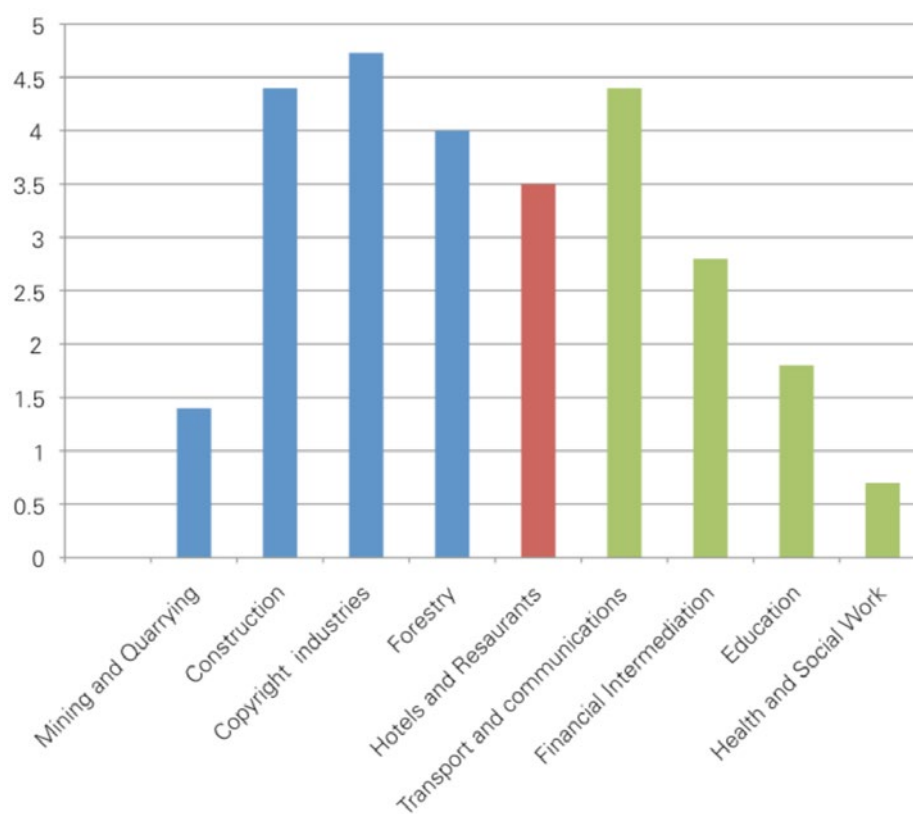
Copyright industries	Import	Export	Trade balance
Core	1,049,289,952	13,378,815	-1,035,911,137
Interdependent	22,874,288,505	226,506,900	-22,647,781,605
Partial	349,692,267	13,216,025	-336,476,242
Non-dedicated	85,496,620	212,400,000	126,903,380
<b>Total for copyright industries</b>	<b>24,358,767,344</b>	<b>465,501,740</b>	<b>-23,893,265,604</b>
<b>Total for the economy</b>	<b>223,999,300,000</b>	<b>71,434,925,500</b>	<b>-152,564,374,500</b>

Source: Authors' calculations based on data from Ethiopian Revenues and Customs Authority (ERCA) and CSA.

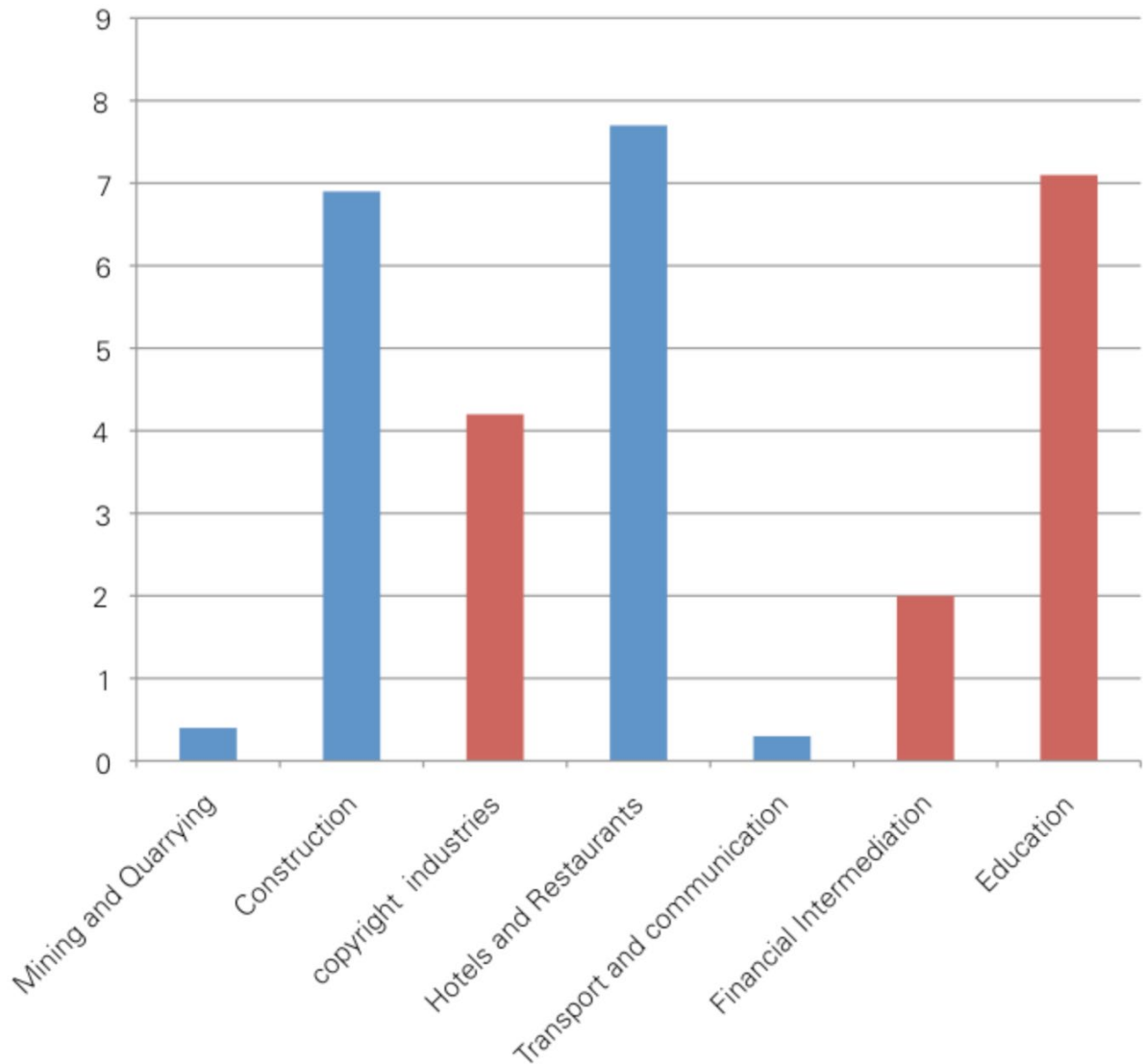
### 5.5 Comparison of Copyright Industries with Other Sectors of the Economy

Comparing the contribution of the copyright industries to the GDP with that of other sectors helps to create a clear picture of their role in national economies. In Ethiopia a comparison of the copyright industries with other sectors of the economy in 2012 shows that the contribution of copyright industries to the GDP was higher than that of many important sectors. Copyright industries contributed more to the country's GDP than construction, mining and quarrying, forestry, hotels and restaurants, financial intermediation, education, electricity and water, transport and communications, and health and social work. The copyright industries also performed better than mining and quarrying, transport and communication, and financial intermediation in terms of employment generation.

**Figure 17: Comparison With Selected Sectors of the Economy in Terms of Contribution to the GDP in 2012 (per cent)**

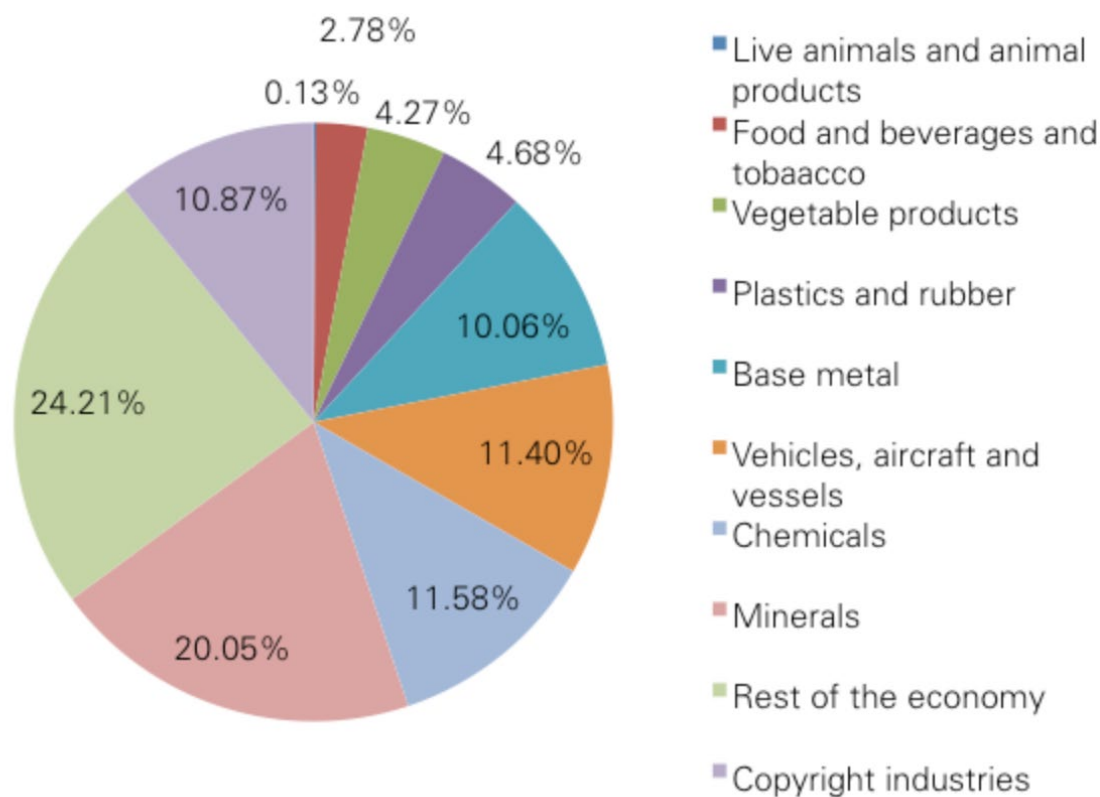


**Figure 18: Comparison with Selected Sectors of the Economy in Terms of Contribution to Employment in 2012 (per cent)**

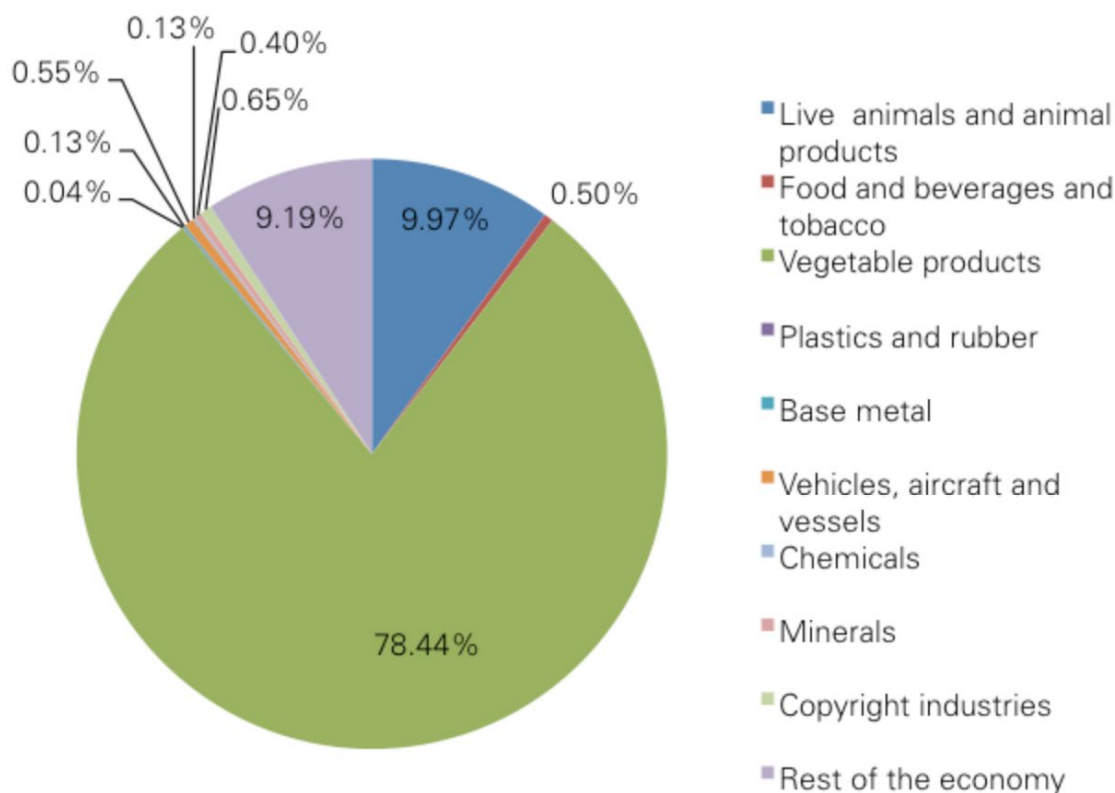


The contribution of the copyright industries to Ethiopia's exports, which stands at 0.65 per cent of the total, is very low compared to many other sectors of the economy. However, the 10.87 per cent share of the copyright industries in total imports is higher than the share of live animals and animal products (0.13 per cent), food, beverages, and tobacco (2.78 per cent), vegetable products (4.27 per cent), plastics and rubber (4.68 per cent), and base metal and articles of base metal (10.06 per cent); and is comparable to the import value of vehicles, aircraft, and vessels (10.93 per cent).

**Figure 19: Share of Copyright Industries in Imports in 2012: Comparison with Other Sectors**



**Figure 20: Export Contribution of the Copyright Industries: Comparison with Other Sectors, 2012**



## 6. International Comparisons

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Many studies have been carried out worldwide to determine the contributions of the copyright industries to a country's economic activity. As these studies have used the methodology suggested by WIPO, the results of this study can be compared easily with those of other countries. Such uniformity in methodology is very important, as it enables comparisons to be made with other countries of the region, or others worldwide, in terms of the copyright industries' contribution to selected indicators, such as GDP, employment, and foreign trade. The international comparison helps in raising awareness among public and private institutions involved in copyright of the economic importance of this sector, which was not fully appreciated until recently.

An overview by WIPO on national studies on the economic contribution of the copyright industries revealed that the overall performance of the copyright industries in the countries that undertook the study indicates the existence of a sizeable sector, which in most countries was found to be beyond the level of expectations. The overview included the findings of surveys in three African countries: Kenya, South Africa, and Tanzania. The contribution to GDP varies significantly across countries, from 11.10 per cent in the USA to 1.58 per cent in Brunei. With an average of 5.26 per cent, three-quarters of countries have a contribution between 4 per cent and 6.5 per cent. Countries that have experienced rapid economic growth typically have an above-average share of GDP attributed to copyright industries.<sup>27</sup> The finding of the Ethiopian survey, which showed that copyright industries contributed 4.73 per cent of the GDP, falls within the range of the results obtained in the majority of the countries surveyed.

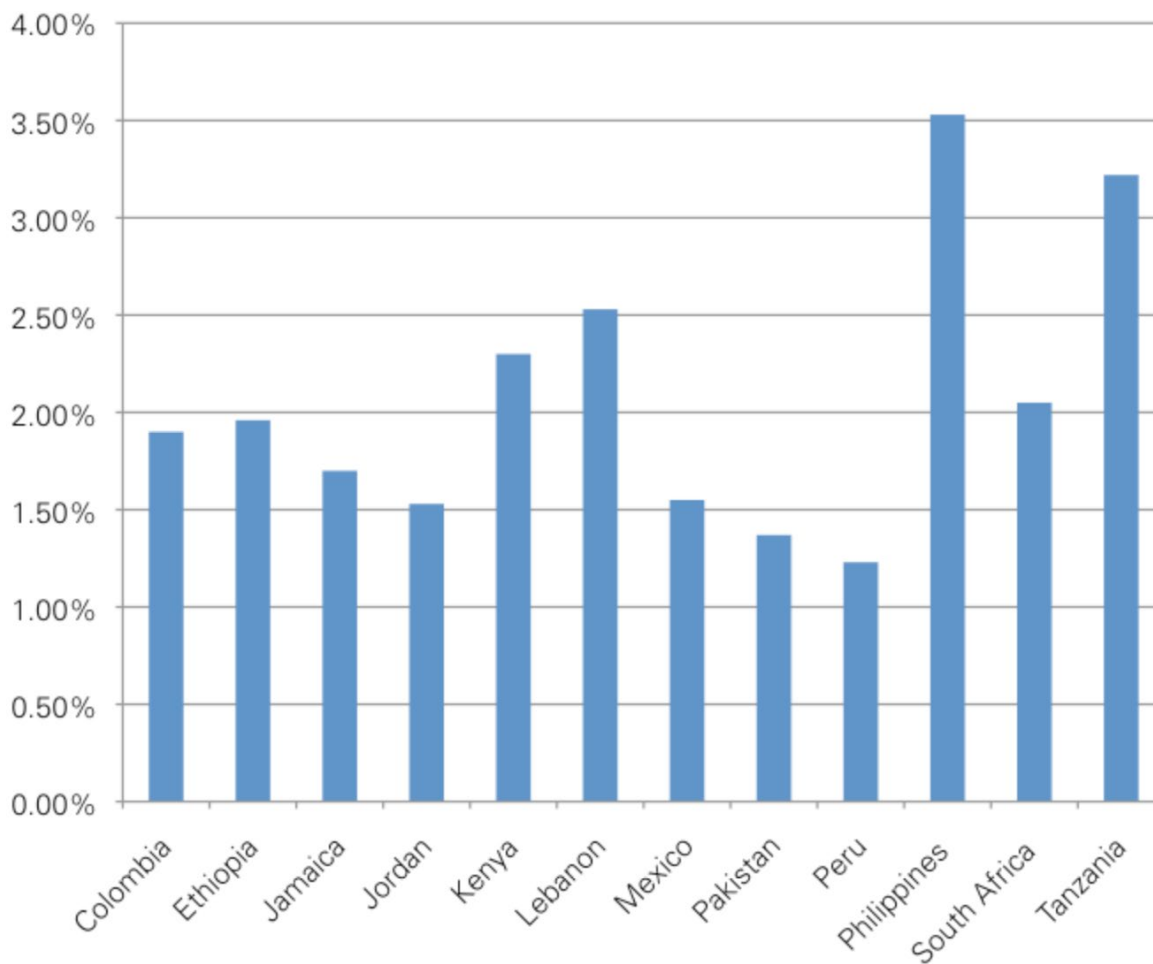
The national studies showed that the contribution of copyright industries to national employment is slightly higher than the share of GDP and stands at an average of 5.49 per cent. Nearly three-quarters of countries fall in the range between 4 per cent and 7 per cent contribution to national employment. The contribution of copyright industries to employment in Ethiopia, which was at a level of 4.2 per cent, was also within this range.

With 4.73 per cent contribution to GDP, the share of copyright industries in Ethiopia was higher than that of Brunei (1.58 per cent), Colombia (3.3 per cent), Dominica (3.4 per cent), Jordan (2.43 per cent), Peru (2.67 per cent), and Ukraine (2.85 per cent). In terms of contribution to employment, Ethiopia's copyright industries outperformed similar industries in Brunei (3.2 per cent), Grenada (3.6 per cent), Jamaica (3.03 per cent), Jordan (2.88 per cent), Kenya (3.26 per cent), Pakistan (3.71 per cent), Panama (3.17 per cent), Romania (4.19 per cent), South Africa (4.08 per cent), St. Kitts and Nevis (3.1 per cent), and Thailand (2.85 per cent).

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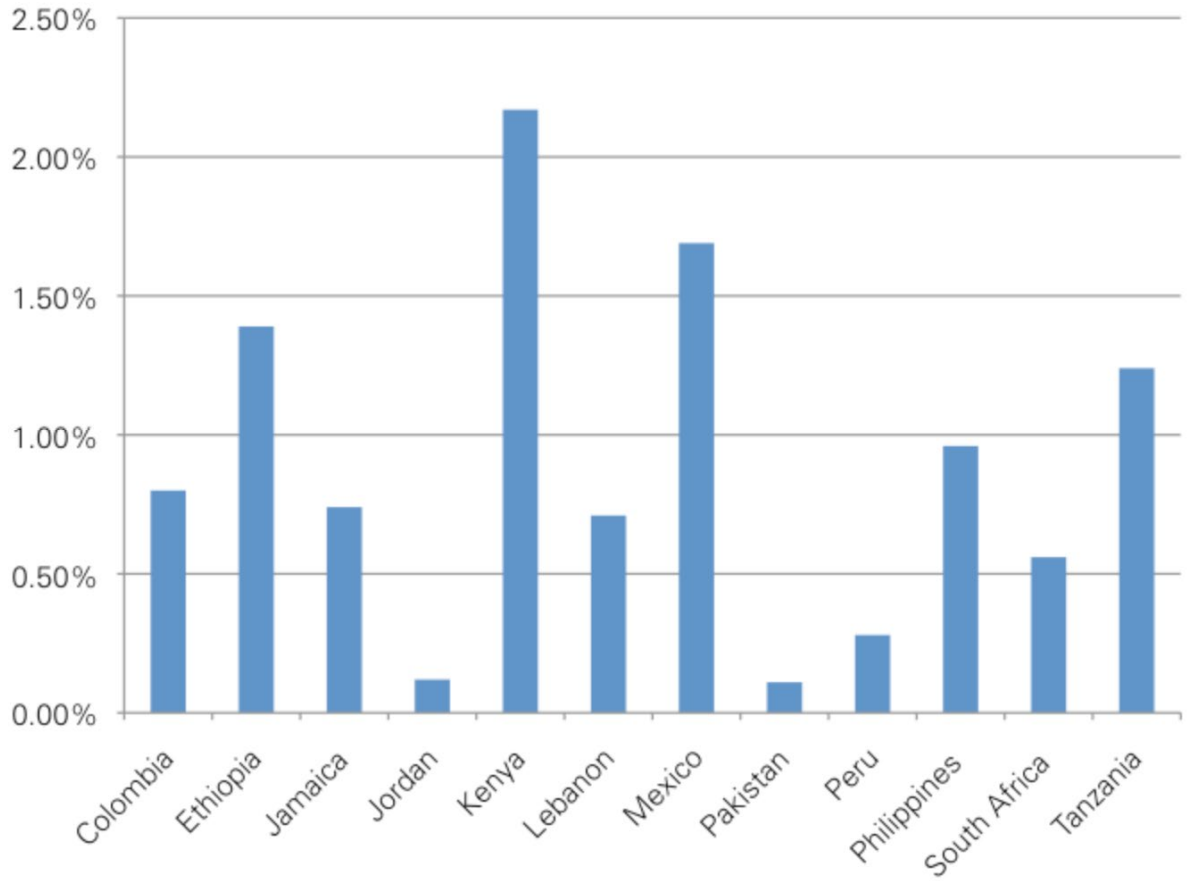
<sup>27</sup> WIPO. (2013) *WIPO Studies on the economic contribution of copyright: Overview*. Geneva.

**Figure 21: Comparison of the Contribution of Core Copyright Industries to GDP with Selected Developing Countries**

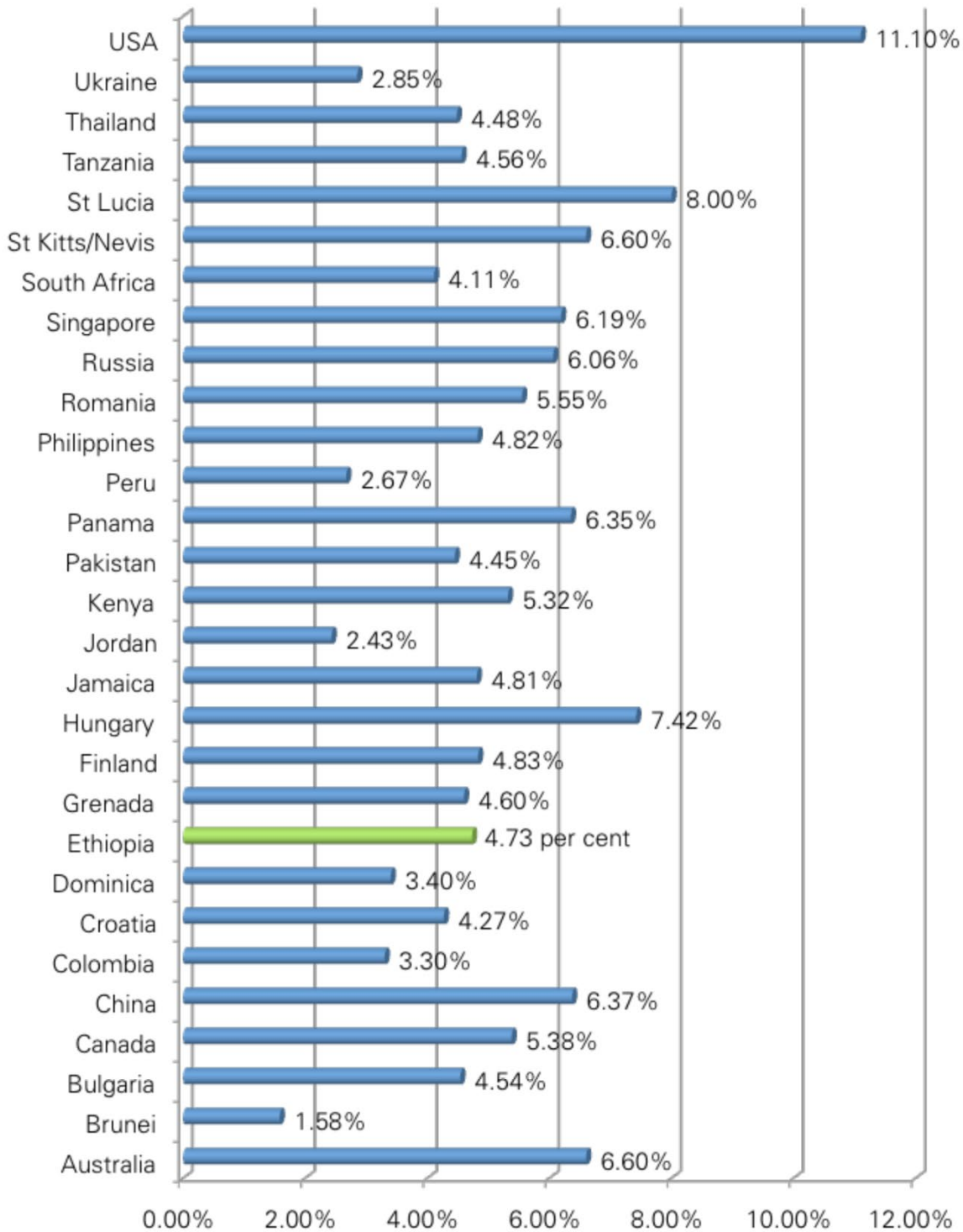


With a contribution of 1.96 per cent to GDP, the core copyright industries in Ethiopia had a higher percentage share than core industries in Jordan (1.53 per cent), Mexico (1.55 per cent), and Pakistan (1.37 per cent). However, the contribution of the core copyright industries to the economy of the Philippines (3.53 per cent) was nearly twice as high as the corresponding figure in Ethiopia. The core copyright industries in Tanzania, with 3.22 per cent contribution to GDP, also had a significantly higher value compared with the figure for the corresponding industries in Ethiopia. In the majority of the countries the core activities contributed more than 50 per cent of the share of the copyright industries to GDP. However, in Ethiopia the share of the core copyright industries was only 41.5 per cent of the sector's contribution to GDP.

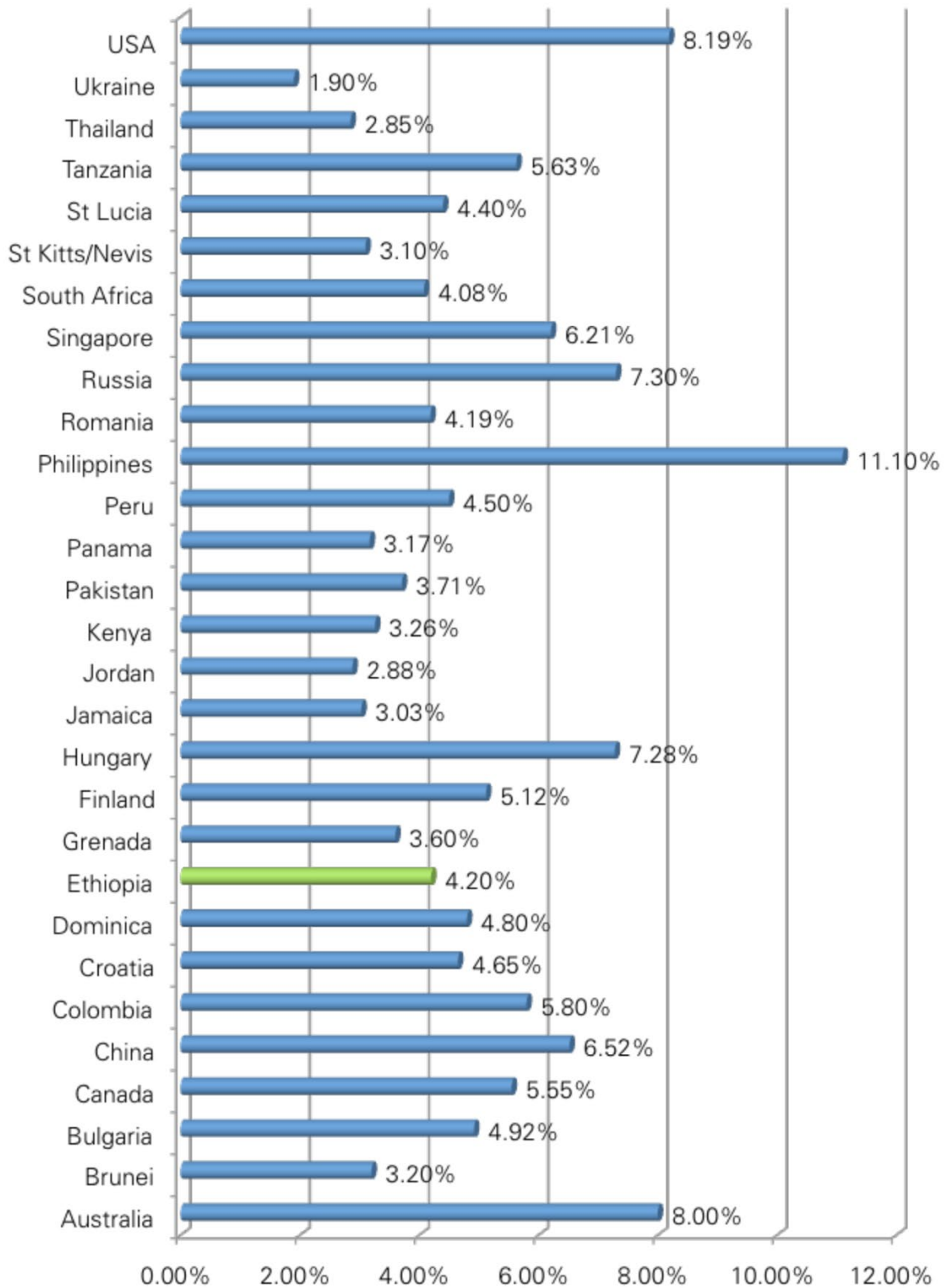
**Figure 22: Comparison of the Contribution of Interdependent Copyright Industries to GDP with Selected Developing Countries**



**Figure 23: International Comparison of the Contribution of Copyright Industries to GDP**

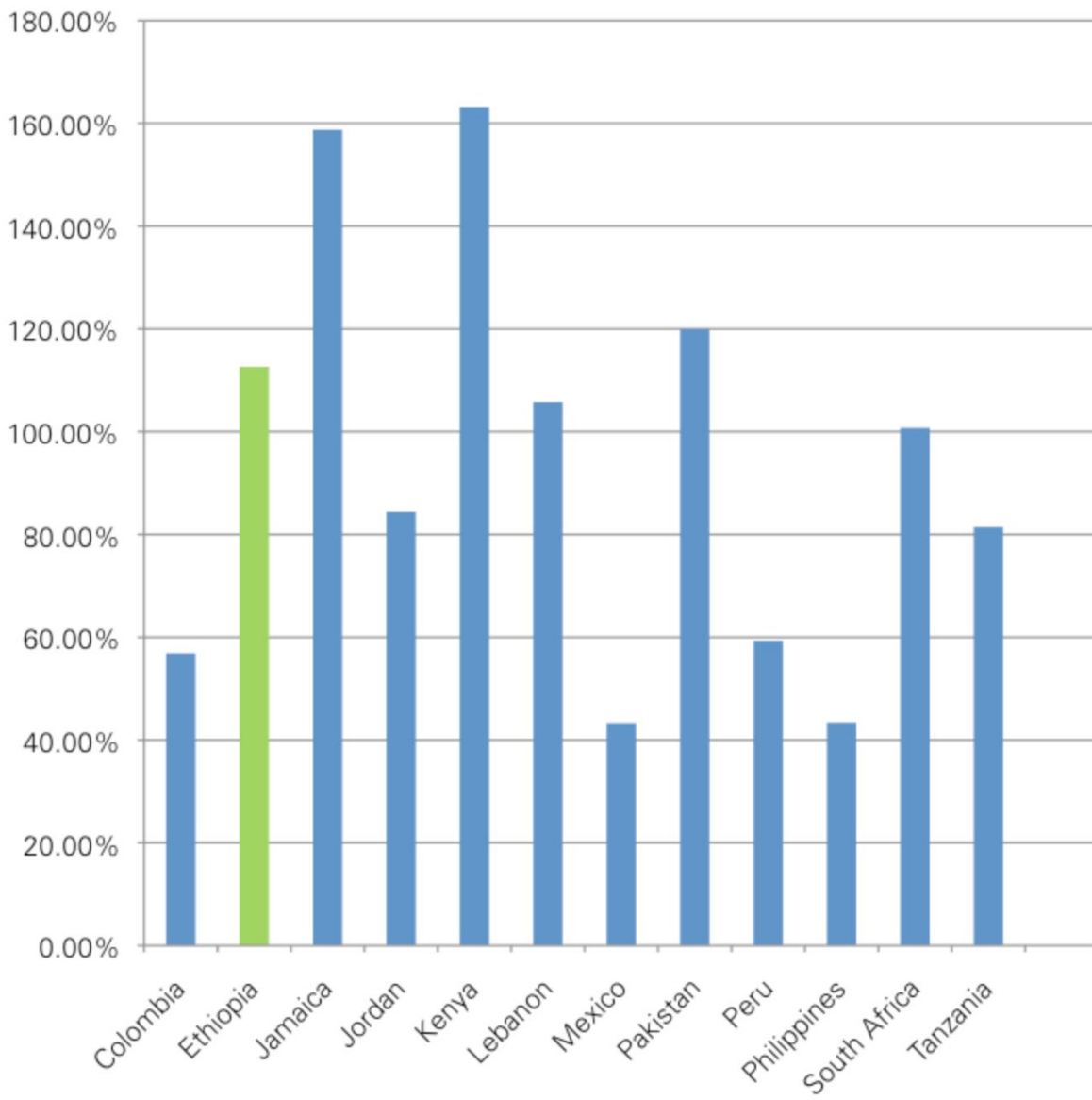


**Figure 24: Contribution to Employment: International Comparison**





**Figure 25: Productivity Index: International Comparison**



## 7. Profile of Selected Core Copyright Industries in Ethiopia

### 7.1 Press and Literature

Ethiopia has a vast body of literary works going as far back as the fifth century. The many religious writings in the Ge'ez<sup>28</sup> language testify to past developments of Ethiopian literature. However, a long period of political disturbances in the country, which lasted for more than five centuries, negatively affected the production of literary works. The revival of Ethiopian literature came in the thirteenth century, which was the most productive era of Ge'ez literature. The most significant work of early Ethiopian literature, which was produced during this era, is the "KibreNegest" or Glory of the Kings. The book combines history, moral teachings, and symbolism in its narration of the story of Queen Sheba, King Solomon, and their son, Menelik I of Ethiopia. This work represents a crucial part of the literature and culture of Ethiopia.<sup>29</sup> Other early translations and original religious works include: *Weddase Mariam* ("Praise of Mary"), *Fekkarelyasus* ("Elucidation of Jesus"), *Ta'amra Maryam* ("The Miracles of Mary"), "Mystery of Heaven and Earth," and "Book of Mystery".

Secular writings became part of Ethiopian literature in the nineteenth century. During this period the Amharic language started to be used for literary purposes. The first major Amharic work of literature was "*TobiaLibbWolled Tarik*", a fictional story by AfeworkGebre-Yesus printed in 1908. This Amharic novel was the first, not only in an Ethiopian language, but also in an African language.<sup>30</sup> After AfeworkGebre-Yesus's book, up until the 1930s, Ethiopian writers wrote a sizeable number of literary works. With the restoration of Ethiopian independence after the Italian occupation of 1936–41, a great impetus was given to Amharic literature, with Emperor Haile Selassie encouraging authors to produce many types of books, especially on moral and patriotic themes.

The 1950s saw the appearance of outstanding works with excellent writing techniques in different literary genres. The two decades that followed are considered periods during which high quality literary works were produced. However, because of censorship and a lack of the necessary infrastructure for publishing, the number of published works was not satisfactory. There was also a very low readership of literary works because of the low literacy rate.

A national literacy campaign was launched in 1979 in a nationwide effort to raise literacy levels. The government organized the campaign in rounds, which began in urban centers and spread outward to remote parts of the country. The campaign has contributed to increasing the literacy rate in the country. This can be taken as an important contributing factor in increasing the number of readers in the country. The role of the mass media in improving the literary culture of the country and increasing the number of writers and readers is also worth mentioning.

The creation of publishing houses also significantly contributed to the growth of literature in the country. The early development in this respect is the establishment of Ethiopian Book Enterprise in 1977 as a private company. This was followed by the creation of Kuraz in 1978 as a government publishing enterprise. Kuraz was engaged in the publication of literary works as well as the import and distribution of books. Currently there are many publishing houses in Ethiopia, including the Mega Publishing and Distribution Company, which is the largest book publisher and has been operating in the country for several years.

Regarding newspaper publishing, the first newspaper—"Aimero"—was published in 1902. The founding of the *Berhanena Selam Amharic Newsletter* in 1923, with its circulation of five hundred copies, and the first monthly magazine consisting of different European languages, including an Amharic section, represent important advances in the development of the press in Ethiopia. Currently, Ethiopia's biggest daily newspaper, the government daily *Addis Zemen*, has a normal print run of fewer than 13,000 copies per day. There are also some 30 weekly and monthly newspapers published in Addis Ababa and a handful of other major cities. The largest of these is the privately owned weekly *Addis Admas*, which has an average print run of 21,000

<sup>28</sup> Ge'ez is a Semitic language formerly spoken in northern highland Ethiopia and still used as the liturgical language of the Christian church in Ethiopia.

<sup>29</sup> Wright, Stephen Graham, Ethiopian Literature, Britannica Academic edition. [www.britannica.com/EBchecked/topic/194186/Ethiopian-literature](http://www.britannica.com/EBchecked/topic/194186/Ethiopian-literature) (accessed 15 January 2015).

<sup>30</sup> Ellene Mocria, Mesfin Messele and Alemayehu Gebrehiwot. (2003) *Survey of Culture and Media: Ethiopia*. Sida, Department for Africa.

to 25,000 copies. Other private newspapers in Ethiopia include the *Reporter*, *Fortune*, *Capital*, and the *Daily Monitor*.

**Table 27: Government Newspapers and Magazines in Ethiopia**

Newspaper	Language	Year established	Number of copies circulated in 2010/11
Addis Zemen (Daily)	Amharic	1941	4,628,300
Ethiopian Herald (Daily)	English	1951	2,743,400
Baarisa	Oromifa	1942	650,900
Al-alam	Arabic	1977	26,000
Zemen Magazine	Amharic	2001	15,000

Source: Government Communication Affairs Office (GCAO).

The leading printing company in Ethiopia is BerhanenaSelam Printing Enterprise, which was established ninety years ago. When it was first set up, the enterprise was mainly engaged in the printing of religious books, produced in both Ge'ez and Amharic versions. Currently, the enterprise prints more than 90 per cent of daily and weekly newspapers across the country. Today there are a number of private and government-owned printing enterprises in the country. The sector is dominated by small and medium-sized enterprises.

Associations in the different sub-sectors of press and literature play important roles in the promotion of copyright activities and the protection of the rights of their respective members. These associations are the Ethiopian Publishers and Printers Association, established in 2004; the Ethiopian Writers Association, established in 1960; and the Ethiopian Women Writers Club, formed in 1997 and renamed as the Ethiopian Women Writers Association in 2005. These associations have 31, 1200, and 267 members, respectively.

## 7.2 Music

Church music and religious dance have been practiced by priests and deacons in Ethiopia from as early as the sixth century CE. St. Yared, who was born in 505 CE, was the creator of hymns specifically written for the purpose of praise and prayer in the ancient Ethiopian language of Ge'ez. St. Yared invented a notation system consisting of syllabic letters, curved signs, dots, and dashes. Folk music has also been part of Ethiopian life from time immemorial. The various tribes and ethnic groups of the country have their own distinct music, culture, and tradition. They have their own sounds that distinguish them from their neighbors, with each tribe having its unique dance patterns. Traditional music performances in Ethiopia are usually accompanied by dances. In folk songs, everyone participates — men, women and children. Even if there is a special performer singled out, the rest of the group surrounds him/her and claps and dances, joining in with the chorus. Religious festivals, along with other feasts and weddings, provide ideal occasions for folk music and dance in Ethiopia.

Many tribes have special music for different events such as weddings, harvests, and funerals. The lyrics are associated with the events and in some cases special musical instruments are used for the purpose. Communal works are also accompanied with songs and dances that help to boost the morale of those participating in the work and make them more productive. Some of the communal works in Ethiopia are planting, coffee picking, and cotton picking. In addition, travel songs help travelers to persevere during long journeys.

Traditional Ethiopian musical instruments include the *masinko*, a single-string violin-like instrument that is played with a bow; the *krar*, a six-stringed lyre played with fingers or a plectrum; the *washint*, a flute made from bamboo; and various drums. Three types of drums are used on different occasions: the *negarit* (kettledrum), played with sticks; the *kebero*, played with hands; and the *atamo*, tapped with the fingers or palm. Other instruments include the *begena*, a huge, multi-stringed lyre often referred to as the Harp of David; the *tsinatsil* or *sistrum*, which is used in churches; the *meleket*, a long trumpet without fingerholes; and the *embilta*, a large, one-note flute used on ceremonial occasions.

The *masinko* is often played by "Azmaris" who give public performances in local bars. The word Azmari has its roots in the Ge'ez language and means a singer. In most cases, when Azmaris perform they improvise lyrics

with double meanings, known in Ethiopia as *semina* work, which is translated as wax and gold. Audiences are not meant to take the lyrics literally; rather, they are challenged to listen carefully to get the “golden” sense. Azmaris also accept verses given to them by members of the audience and skillfully incorporate them into their music. In traditional Ethiopian music and culture, the improvisational skill of the Azmari is as important as his/her vocal performance, or his/her skill at playing the *masinko*. With such improvised lyrics, one may appreciate, denounce, advise, teach, and entertain.

Modern music is a recent phenomenon in Ethiopia. It is associated with the coming of forty Armenians to Ethiopia in the 1920s. Most of these Armenians were musicians, and they had composed parade music for the coronation of RasTeferi Mekonen (Haile Sellassie I) in 1930. The group continued to play modern music in Teferi Mekonen and Menelik II schools until 1935. The first musical orchestra was formed in 1945 within the Imperial Bodyguard. This was followed by the establishment of musical orchestras by the Ground Force and the Police Force, which performed to the public. Although the bands were formed for strictly military purposes, the music they played became very popular with the civilian population. The Imperial Bodyguard in particular deserves a large part of the credit for introducing to the Ethiopian public new instruments and styles of music. The establishment of an orchestra by the Haile Sellassie I theater also deserves much credit for the development of modern music in Ethiopia.

Although music education started in 1945 with a limited number of students, the pivotal event was the establishment of a music school in 1966. The school was built by the Bulgarian government and named “*St. Yared*” after the famous Ethiopian saint who composed Ethiopian sacred chants and developed musical notation. Ever since, the school has been training professional musicians and music teachers and promoting cultural exchanges with foreign countries and artists. To a certain extent the training given at the school helped to change the perception of the people towards music and performances. Recently, the school became part of Addis Ababa University and started offering degree-level courses to students.

The mushrooming of amateur music groups beyond the role they played to introduce modern music widely did not significantly contribute to the development of the art. Apart from this, few students were sent abroad for higher training. Commercial activity in music, in the form of cassette recording, has also been widely promoted. The sector is still suffering from a lack of skilled manpower, copyright infringement, and other such problems.

Currently the Ethiopian music industry comprises authors, musicians, composers, record companies, agents, and distributors. The industry creates jobs for a number of Ethiopians and makes a considerable contribution to the economy. However, a sizable number of companies left the sector due to the damage they suffered from the distribution and sale of pirated products.

Three professional associations have been established to promote the interests of musicians, vocalists, and sound-recording companies. The objectives of the associations also include contributing to the development of the copyright industry in Ethiopia. The first of these associations, the Ethiopian Audio-Visual Producers Association, was established in 1996 through the initiative of private music and film producing enterprises in the country. The association has been instrumental in promoting respect for copyright in Ethiopia and improvement in the quality of audiovisual products. The Ethiopian Musicians Association, which was established in 2004, works for the protection of the rights of its members and encourages the development and promotion of musical works. The association has 893 members. Ethiopian vocalists also formed an association in 2012 to protect their rights and contribute to the development of the sector. Membership in this association currently stands at 83.

The Collective Management Society of Ethiopia, which is an umbrella association for copyright holders associations, has not yet become fully functional following its establishment. Therefore, it has been unable to play its expected role in promoting respect for copyright in the music industry.

### 7.3 Theater

The origin of Ethiopian theater may be traced back to the Axumite period, which existed from approximately 100–940 CE. The Empire of Aksum is notable for a number of achievements, such as its own alphabet and literature. The Ethiopian Orthodox Church, with its costumes and props, clerical vestments, multi-colored umbrellas, dances of the clergy, prayer sticks and drums, and *sistra*, was an arena for the highest theatrical

development in Ethiopia.<sup>31</sup> It is also possible to consider the early performers of war songs as actors for their dramatic way of presentation.

Theater in its modern form started in the early twentieth century with the introduction of a western education system into the country. Young Ethiopians who were sent abroad also brought the art into the country. Bejrond Teklehawariat Teklemariam was one of those Ethiopians who received an education abroad. He is credited with being the writer and producer of a comedy play based on the fables of *La Fontaine* called *Fabula* (1913), which was considered the first play in the history of modern theater. After *Fabula*, plays written and directed by teachers were staged in schools for special events such as national holidays and school days.

Just before the Italian invasion of Ethiopia in 1935, theatrical shows intended to arouse the morale of the people to defend their country were presented to the public. It was during this time that the Hager Fikir Theater was founded to encourage the patriotic mettle of the Ethiopian people. The Hager Fikir Theater is “a theater with the greatest tradition in Ethiopia and the oldest indigenous theater in Africa”. The first performances of the Hager Fikir group took place in a place called Menelik II Square before the erection of the present theater. After the war, the group resumed activities centered on further uniting the people and assisting national development. It was felt that the theater was an excellent medium for enlightening the public. Nowadays the Hager Fikir Theater has on its schedule movie performances and theatrical plays. In 1955, the Haile Selassie I Theater (now the Ethiopian National Theater) was inaugurated on the occasion of the Silver Jubilee of the Emperor’s coronation.<sup>32</sup> The series of theatrical shows that followed the opening of the Ethiopian National Theater were far more modern in style than those performed earlier. The stagecraft, lighting, costumes, and makeup were advanced enough to draw the appreciation of the people.<sup>33</sup> Until 1974 theatrical shows whose themes mainly focused on the social life of the people were staged.

After the 1974 Ethiopian revolution that overthrew Emperor Haile Sellassie, many theatrical productions aimed at convincing the people about socialist ideology were staged in different parts of the country. During this period amateur clubs also spread in the country. Currently the National Theater is a stage for music and theatrical performances.

The Theater Arts Department of Addis Ababa University was opened in 1978 and has been producing the necessary skilled manpower. This has been an enormous contribution to the development of the art. The graduates of the Department have been employed by various governmental and non-governmental organizations at both the federal and regional levels. The Department, however, with its very limited budget, was not able to afford important materials and technical equipment such as lighting and sound systems, computers, printers, scanners, etc. The Department is now under the recently formed College of Performing and Visual Arts, which comprises the School of Theater Arts, the Yared School of Music and School of Fine Arts and Design, the Cultural Center and Modern Art Museum, and the Gebre-Kirestos Desta Center.

There are some cases of misappropriation of theater works, especially the works of young playwrights. Some reports to the Ethiopian Intellectual Property Office indicated misappropriation of scripts submitted for evaluation and possible staging. However, due to a lack of studies addressing copyright protection in the music industry, it is difficult to give a detailed picture of the situation in the sector.

## 7.4 Motion Picture and Video

Cinema was introduced to Ethiopia only three years after the world’s first film was projected in Paris.<sup>34</sup> Later, the first cinema hall was opened in the year 1923. Until 1974, there were many cinema halls in the country. However, due to the nationalization of all cinema houses by the government in 1974, the number of cinema houses, instead of increasing, has gradually decreased.

Film production in Ethiopia began during the reign of Emperor Haile Selassie I with a film on his coronation. Following this, documentary films on different issues featuring historical sites, developmental activities, etc. were produced. There were also limited feature films produced by Ethiopians. The Ethiopian film industry that focused mainly on the production of documentary films continued with the establishment of the Ethiopian

<sup>31</sup> Mocria, E., Messele, M., and Gebrehiwot, A. (2003) *Survey of Culture and Media*: Ethiopia. Sida, Department for Africa.

<sup>32</sup> Ethiopian National Theater: Abridged History. [www.mysc.gov.et/NationalTheater.html](http://www.mysc.gov.et/NationalTheater.html) (accessed 15 January 2015).

<sup>33</sup> Mocria, E., Messele, M., and Gebrehiwot, A. (2003) *Survey of Culture and Media*: Ethiopia. Sida, Department for Africa.

<sup>34</sup> Tamene, K. (2014) *A Brief Overview of Ethiopian Film History: From Early Cinema to Contemporary*.

Film Center in 1978. The center was then replaced by the Ethiopian Film Corporation, which was established by Decree No. 306/1986.

These institutes were able to produce a total of 27 documentaries. Apart from these documentaries, two feature films entitled *BehiywetZuria* and *Aster* were produced. In contrast to the period covered, however, very little was achieved. This was particularly the effect of the divorce of the sector from private investment after the 1974 revolution.

The Ethiopian film industry has seen a great rise in the past ten years. The industry is growing significantly, generating more than a hundred movies a year. The number of viewers of local movies has increased to an average of 2.7 million over the last ten years from less than 200,000 before. The industry has come a long way in attracting more investors and skilled producers into the field of cinematography. Cinema halls are equipped with 2D, 3D, and high-tech 7D entertainment gadgets. However, the progress of the sector is very slow in view of the great opportunities the country has for its development.

The Ethiopian Filmmakers Association (EFIMA) was established in 1993 as a professional association of filmmakers with the prime objective of developing and expanding film and the film industry in Ethiopia. At the time of its establishment EFIMA had 27 founding members, who were employees of the Ethiopian Film Corporation—the only public enterprise of the nascent cinema industry at the time. Having 150 members who represent over five different regions in the country, EFIMA remains a pioneer association with a wide reach of filmmakers in Ethiopia.

## 7.5 Radio and Television

Radio is the main source of news and information in Ethiopia, especially in the rural areas where 80 per cent of the population lives. The government-owned Radio Ethiopia is the largest radio station with a nationwide reach through its network of Medium Wave transmitters across the country. The station broadcasts mainly in Amharic, but also has daily programs in Afaan, Oromo, Tigrigna, Somali, Afar, and English. Radio Ethiopia has both a national service and international services.

There are 47 radio broadcasting sites (23 public broadcasting sites, 6 commercial broadcasting sites, and 18 community broadcasting sites) in the country. Only three of these radio stations (Radio Ethiopia, Radio Fana, and Voice of Woyane Tigrai) have national coverage. Regional and community radio stations mainly broadcast in the local languages spoken within their coverage area. News and current affairs programs attract the biggest audience, while music and drama are the second and third most popular forms of radio programs.

Television service was first introduced to Ethiopia in November 1964, on the occasion of the first OAU Head of States meeting and to commemorate Emperor Haile Selassie's thirty-third Coronation Anniversary. Ethiopia Television broadcasts around the clock. Most of its output is in Amharic, but there are also regular programs in Somali, Tigrinya, Oromo, Afar, English, Arabic, and French. There are also five regional TV stations run by regional governments: Oromia TV, Dire TV, Addis TV, Somali TV, and Harari TV. There are no private television companies in Ethiopia.

The umbrella grouping for state radio and television is the Ethiopia Radio and Television Agency (ERTA), recently reestablished as the Ethiopian Broadcasting Corporation (EBC). This runs Ethiopia Radio, the only radio station with a genuinely nationwide reach, and Addis FM 97.1, which broadcasts to the capital and the surrounding area.

The community stations are partly financed by the government, but they also raise revenue from advertising and donations. Many of their staff are volunteers. Most of them serve small ethnic groups that have a strong sense of local identity. Ethiopia's larger radio stations, especially those based in Addis Ababa, mainly broadcast in Amharic. However, they also weave selected programs in Ethiopia's other main languages into their broadcasts.

## 7.6 Visual and Graphic Arts

Ethiopia has a centuries-old tradition of religious painting. The illuminated religious books and mural arts in a number of churches are testimonies to the long history of art in the country. For centuries, painting and calligraphy were taught in the monasteries of the Ethiopian Orthodox Church. Traditional Ethiopian painting

is characterized by a two-dimensional perspective, stylized facial expressions, and bright color with black outlines.

At all times in Ethiopian paintings, the content of the picture is predominant and the purpose is to illustrate the story. Church decorations, which in Ethiopia are second in importance to manuscript illumination, are another medium used in Ethiopian artistic expression. Some murals go back to the fifteenth and sixteenth centuries, but very few churches survived the devastations of the religious war in the early sixteenth century.

Quite a large number of church murals are secular in nature in that they are paintings of emperors and other important personalities, as well as of battles and similar historic events. Later on, paintings on different themes such as hunting, wars, dressing styles of patriots, and the historical journey of Queen Sheba to Israel began to be on sale for tourists as well as to Ethiopians.

The return of foreign-trained young Ethiopian painters from abroad in the 1940s brought about a meaningful change in Ethiopian painting. This, coupled with the expansion of modern education in the country, has contributed to the gradual change in the styles of traditional paintings and the transfer of the skill from parents to children. In this regard, the incorporation of painting into the school curriculum, and the offering of courses to students above grade four since 1931, had a significant role. The Department of Fine Arts was opened under the Ministry of Education and Fine Arts in 1940 to follow up and facilitate this activity. The Addis Ababa Fine Art School, which now serves as a national institution, was also established in 1957. It could be said that the foundation for the development of modern painting was laid down in 1957 and in the years up until 1974.

## 8. Conclusions and Policy Recommendations

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This study has attempted to measure the economic performance of the copyright industries in Ethiopia. The 2003 WIPO guide on surveying the economic contribution of copyright industries was employed for the study. Analysis of the study was based on the contribution of the copyright industries to the GDP, their share in employment, and export and import values. The study has revealed the crucial role of the products and services provided by the copyright industries in generation of value added, employment creation, and export earnings. The study found that these industries created 23,989,211,925 Birr worth of gross value added, which represented 4.73 per cent of Ethiopia's GDP. The importance of the copyright industries to the Ethiopian economy was also reflected by the 240,287 jobs they created and the 465,501,736 Birr export income they fetched.

Due to problems of data availability, it was not possible to include quantitative information on some of the activities identified in the WIPO guide. The data problem was more noticeable in the core copyright industries. Estimations of value added, contribution to employment, and share in foreign trade of photography and visual and graphic arts are, therefore, not part of the analysis. The copyright and related rights collective management society, which is the only one of its kind in Ethiopia, is also not fully operational. Therefore, it was not possible to include data on its activities. The same problem was encountered for some sub-sectors in the partial copyright industries; statistics from different official sources contained detailed information about traditional sectors rather than about copyright industries. This limitation obviously affects the estimation of the actual added value of the copyright industry and its role in employment generation and export earnings.

Despite these data-related problems, the findings of this study revealed that copyright industries represent a sizable sector of the Ethiopian economy. The results of the study showed that the copyright industries outperformed some important sectors of the economy by generating higher value added. Copyright industries contributed more to the country's GDP than construction, mining and quarrying, forestry, hotels and restaurants, financial intermediation, education, electricity and water, transport and communications, and health and social work. Total employment in the copyright industries was also found to be higher than the combined share of mining and quarrying, transport and communication, and financial intermediation. International comparisons also showed the relatively better performance of the copyright industries in Ethiopia than in some of the countries that had undertaken similar studies. The relative strength of the industries is more noticeable in the area of contribution to GDP, where the performance is better than that of economies like Colombia, Jordan, Pakistan, South Africa, Tanzania, and Ukraine. In terms of employment generation, the copyright industries in Ethiopia outperformed those in Kenya, Pakistan, Romania, South Africa, and Thailand. These findings suggest that copyright-related issues are highly relevant and important for Ethiopia due to their enormous potential for economic development.

On the basis of the evidence presented in this document and the revealing findings of the study, the following recommendations are made to Ethiopian policy makers:

With the right policy measures the country can realize the potential of the copyright industries in wealth creation, employment generation, and export promotion. Hence there is a need for government policies that establish an effective link between creativity and economic development. Proper understanding should be created among policy-makers of the interface between activities in the copyright industries and a number of other activities in different sectors of the national economy. When policy-makers appreciate the potential of the creative industries for sustainable economic development, it becomes possible to put the right policies in place. The lack of appropriate policies for development of the copyright industries will not only constrain the performance of literary, artistic and other creative works that are classified as core copyright activities, but will also affect activities in many other sectors of the economy in both the production and service sectors. Similarly, many government policies in different social and economic sectors of the economy have both direct and indirect impacts on the performance of the copyright industries. Therefore, the interface between the creative industries and other economic activities should be a central issue in policy making. Mechanisms should be developed to improve coordination of policy making to realize the full economic potential of the country's copyright industries. Immense economic benefits could be obtained through the integration of copyright issues with other areas of economic and development policy.



Current realities in Ethiopia show the need for stronger copyright protection and enforcement for the growth of the creative industries. However, copyright policies should not be dictated by the interests of the right holders alone; instead, due consideration should be given to the interests of the right holders in obtaining returns on their investment while recognizing the need for improved access to knowledge by the majority of the people. The current initiative to ensure access to education by all will be affected by the kind of copyright system the country tries to build. Similarly, the country is a consumer of materials and publication products from abroad, which are necessary to facilitate research and to expand and improve higher education.

The right balance has to be struck between protecting copyright and ensuring adequate access to knowledge and knowledge-based products. This can be achieved through informed copyright policy making. Good evidence-based policy allows the use of copyright protection as a stimulus to creativity, minimizing the negative impact on access to knowledge and knowledge-based products by the different user groups. The issue is central to Ethiopia because entrepreneurs and creative people are suffering from copyright infringement. At the same time, improving access to knowledge-based products is a priority in the country.

Evidence-based copyright policy making becomes possible when there are data available for detailed analysis of the sector. The differential effects of government policy on copyright-related activities can be seen when disaggregated data are generated by the government bodies concerned. When different data sources provide researchers with sufficiently rich information, it becomes possible to provide reliable impacts for a copyright policy. Therefore, it is necessary to separate the statistics related to copyright industries and publish them regularly. The Central Statistical Agency, as a government body responsible for the generation of statistical data related to the socio-economic condition of the country, should produce disaggregated data on the different sub-sectors of the copyright industry.

The copyright industries can absorb a sizable number of young people and reduce unemployment. The growing youth population is putting increasing pressure on the labor market in Ethiopia. The traditional economic sectors should not be taken as the only policy options to improve labor force participation and create employment opportunities. A focus on the copyright industries should also be part of employment creation initiatives. Government policies need to encourage and support the creation of micro and small enterprises in the different sub-sectors of the copyright industry. Some of the sub-sectors may require large-scale investment. However, a number of the activities in the core and partial copyright industries can be started with minimum financial resources using the creative talent and entrepreneurial capacity of young people.

The structure of Ethiopian exports is dominated by agricultural products, which constitute a preponderant share of foreign exchange earnings. Coffee has been the dominant export commodity for many decades. The copyright industries provide the country with an opportunity to diversify its export base and improve its export earnings. Ethiopia, as a country of great cultural diversity, has immense potential to benefit from the economic value of the entertainment industry. Copyright protection represents a key factor in promoting the development of music, dramatic arts, and the cinema industry. With the right policy measures and the coordinated actions of the different government bodies in the country, the future of the entertainment industry as a major export sector is bright.

As the first analysis on the economic contribution of copyright-based industries in Ethiopia, the findings of this study confirm the importance of the copyright industries to the Ethiopian economy. Future studies in the area should be carried out on a regular basis on each sub-sector for a deeper examination of the economic significance of the creative industries in Ethiopia. Policy makers should base their actions on the results of such studies and make informed decisions to harness the potential of the creative industries in a way that benefits the national economy.

## Appendices

### Appendix I International Comparison of Copyright Industries

Country	Contribution to GDP (per cent)	Employment share (per cent)
Australia	6.6	8.0
Bhutan	5.46	10.09
Brunei	1.58	3.20
Bulgaria	4.54	4.92
Canada	5.38	5.55
China	6.37	6.52
Colombia	3.30	5.80
Croatia	4.27	4.65
Dominica	3.40	4.80
Ethiopia	4.72	4.50
Grenada	4.60	3.60
Finland	4.83	5.12
Hungary	7.42	7.28
Jamaica	4.81	3.03
Jordan	2.43	2.88
Kenya	5.32	3.26
Korea	9.89	6.24
Latvia	5.05	5.59
Lebanon	4.75	4.49
Lithuania	5.40	4.92
Malaysia	5.70	7.50
Mexico	4.77	11.01
Netherlands	5.90	8.80
Pakistan	4.45	3.71
Panama	6.35	3.17
Peru	2.67	4.50
Philippines	4.82	11.10
Romania	5.55	4.19
Russia	6.06	7.30
Singapore	6.19	6.21
Slovenia	5.10	8.80
South Africa	4.11	4.08
St Vincent	5.60	4.90
Tanzania	4.56	5.63
Thailand	4.48	2.85
Trinidad and Tobago	4.80	5.00
Ukraine	2.85	1.90
USA	11.10	8.19

Source: WIPO (2012): Studies on the Economic Contribution of the Copyright Industries.

## Appendix II Copyright Factors Used in Different National Studies

	Malawi	Bulgaria	Panama	Ethiopia	Finland	Singapore	South Africa
<b>Core copyright industries</b>							
Press and literature	1	1	1	1	1	1	1
Music, theatrical productions, operas	1	1	1	1	1	1	1
Motion picture and video	1	1	1	1	1	1	1
Radio and television	1	1	1	1	1	1	1
Software and databases	1	1	1	1	1	1	1
Advertising services	1	1	1	1	1	1	1
<b>Interdependent copyright industries</b>							
TV sets, radios, VCRs, CD players, DVD players, cassette players, electronic game equipment, and other similar equipment	1	1	1	1	.35	.35	0.35
Computers and equipment	1	1	1	1	.35	.35	0.35
Musical instruments	1	1	1	1	.20	.20	
Photographic and cinematographic instruments	1	1	1	1	.30	.30	0.3
Photocopiers	1			1	.30	.30	0.35
Blank recording material	1	1	1	1	.25	.25	
Paper	1	1	1	1	.25	.25	0.25
<b>Partial copyright industries</b>							
Apparel, textiles, and footwear	0.043	0.006	0.25		0.005/0.027	0.004	0.004
Furniture	0.038	0.050	0.05		0.067	0.083	0.100
Household goods, china, and glass	0.05	0.005	0.05		0.0055	0.006	0.006
Architecture, engineering, surveying	0.1	0.100	0.3		0.09	0.083	
Interior design			0.1			0.083	
Museums		0.500	0.5		0.5		
<b>Non-dedicated support industries</b>							
General wholesale and retailing	0.0315	0.028	0.04		0.06	0.058	0.057
General transportation	0.0315	0.028	0.05		0.06	0.058	0.057
Telecommunications	0.0315	0.028	0.05		0.06	0.058	0.057

## Appendix III Contribution of Copyright Industries to the Ethiopian Economy in 2012

	Contribution to value added	Contribution to employment	Share in imports	Share in Exports
<b>Core copyright industries</b>				
Press and literature	3,502,096,799	39,916	1,005,767,200	7,809,600
Radio and television	2,929,708,977			
Music, theatrical productions, and operas	1,397,698,967		5,190,302	1,873,000
Motion picture and video	550,500,000	14,988 <sup>35</sup>		
Photography			982,668	28,394
Software and databases	584,653,226	17,447		
Visual and graphic arts			10,158,436	3,422,840
Advertising services	980,650,978	6,056	27,191,346	244,981
Copyright collecting societies				
<b>Total for core copyright industries</b>	<b>9,945,308,947</b>	<b>78,407</b>	<b>1,049,289,952</b>	<b>13,378,815</b>
<b>Interdependent copyright industries</b>				
TV sets, radios, VCRs, CD players, DVD players, and other electronic equipment	4,058,765,505	8,104	17,124,755,794	155,588,900
Computers and equipment	542,942,670	5,971	468,249,516	
Musical instruments	19,654,786		25,714,000	700,400
Photographic and cinematographic instruments	69,480,339	46,852	3,051,862,500	69,843,600
Photocopiers	9,286,543		16,743,468	
Blank recording materials	1,252,594,558	9,414	26,356,506	
Paper	1,108,742,695	2,384	2,160,606,721	374,000
<b>Total for interdependent copyright industries</b>	<b>7,061,467,096</b>	<b>72,725</b>	<b>22,874,288,505</b>	<b>226,506,900</b>
<b>Partial copyright industries</b>				
Apparel, textiles, and footwear	1,345,234,672	11,543	45,916,472	7,714,455
Jewelry and coins				
Other crafts				
Furniture	185,558,919	3,418	266,067,495	5,430,420
Household goods, china, and glass	154,661,373	2,342	37,708,300	71,150
Wall coverings and carpets				
Toys and games				
Architecture, engineering, and surveying	481,504,148	458		
Interior design	711,982			
Museums	5,245,391	1,100		
<b>Total for partial copyright industries</b>	<b>2,172,916,485</b>	<b>18,861</b>	<b>349,692,267</b>	<b>13,216,025</b>

<sup>35</sup>The figure includes the number of people employed in reproduction of recorded media, radio, and television.

Non-dedicated support industries				
Wholesale and retail trade	3,763,503,513	58,057		
General transport	559,915,559	12,237 <sup>36</sup>	85,496,620	212,400,000
Telecommunications	486,100,325			
<b>Total for non-dedicated support industries</b>	<b>4,809,519,397</b>	<b>70,294</b>	<b>85,496,620</b>	<b>212,400,000</b>
<b>Total for copyright industries</b>	<b>23,989,211,925</b>	<b>240,287</b>	<b>24,358,767,344</b>	<b>465,501,740</b>
<b>Total for the economy</b>				

<sup>36</sup> Includes the employment figure for communication.



# The Economic Contribution of Copyright Industries in France

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Xavier Greffe  
Economics Centre, the Sorbonne  
University of Paris I



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## Summary

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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 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 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

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## 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 19<sup>th</sup> 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

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## 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](http://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 following 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 Canadian 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
<b>Total</b>	<b>1,363,449</b>	<b>1,477,184</b>	<b>1,473,651</b>	<b>1,470,98</b>	<b>0.12%</b>
<b>Copyright</b>	<b>1,124,314</b>	<b>1,240,187</b>	<b>1,228,763</b>	<b>1,203,466</b>	<b>2%</b>
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%
<b>Neighboring rights</b>	<b>239,135</b>	<b>236,997</b>	<b>244,888</b>	<b>266,921</b>	<b>+9%</b>
<i>Performing artists' societies</i>					
ADAMI	58,171	58,335	65,493	64,686	1%
SPPF	19,794	22,775	22,310	27,847	+25%
<i>Phonograph producers' societies</i>					
SCPP	65,946	64,877	72,147	73,438	+2%
SPPF	19,794	22,775	22,310	27,847	+25%
<i>Audiovisual producers' societies</i>					
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 Lescuré 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”.*<sup>1</sup> 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”.<sup>2</sup> 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.

<sup>1</sup> Lescure Report Vol. 1, p. 15, available at <http://www.ladocumentationfrancaise.fr/var/storage/rapports-publics/134000278.pdf>.

<sup>2</sup> *Ibid.* p. 23.

The Lescuré 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 timid. 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 directives, 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 Lescuré 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

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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](http://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 should 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 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 ( $0.8 \times 40\% + 0 \times 60\%$ ). 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
<b>A88</b>	13	Textiles	42,478		0.29
<b>A732</b>	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
<b>A88</b>	13	Textiles	42,478			0.145
<b>A732</b>	7111Z	Manufacture of made-up textile articles, except apparel	12,151	0.29	0.5	

The following formula was used:

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

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:

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

- 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
<b>18</b>	<b>Printing and reproduction of recorded media</b>	<b>3,991</b>				<b>0.14</b>
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	
<b>46</b>	<b>Wholesale trade, except of motor vehicles and motorcycles</b>	<b>98,901</b>				<b>0.045</b>
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	
<b>47</b>	<b>Retail trade, except of motor vehicles and motorcycles</b>	<b>77,740</b>				<b>0.034</b>
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	
<b>58</b>	<b>Publishing activities</b>	<b>10,747</b>				<b>0.88</b>
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	
<b>59</b>	<b>Motion picture, video and television programmer production activities; Sound recording and music publishing activities</b>	<b>6,451</b>				<b>0.91</b>
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	
<b>60</b>	<b>Programming and broadcasting activities</b>	<b>4,069</b>	<b>1</b>	<b>1</b>		<b>1</b>
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	
<b>62</b>	<b>Other information technology and computer service activities</b>	<b>24,431</b>				<b>0.76</b>
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	
<b>63</b>	<b>Information service activities</b>	<b>3,423</b>				<b>0.15</b>
6391Z	News agency activities	524	0.15	1	0.15	
<b>73</b>	<b>Advertising and market research</b>	<b>8,848</b>				<b>0.85</b>
7311Z	Advertising agencies	4,733	0.53	1	0.53	
7312Z	Media representation	2,803	0.32	1	0.32	
<b>74</b>	<b>Other professional, scientific and technical activities</b>	<b>3,156</b>				<b>0.5</b>
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	
<b>90</b>	<b>Creative, arts and entertainment activities</b>	<b>1,754</b>				<b>0.99</b>
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
<b>TOTAL</b>	<b>Total value added of branches</b>			<b>67.9</b>
	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
	<b>Total interdependent CIs</b>			<b>12.08</b>
	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
	<b>Total partial CIs</b>			<b>38.1</b>
	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
	<b>Total non-dedicated support CIs</b>				<b>24.3</b>
<b>TOTAL</b>	<b>Percentage of GDP aggregate (2012)</b>				<b>1.2%</b>

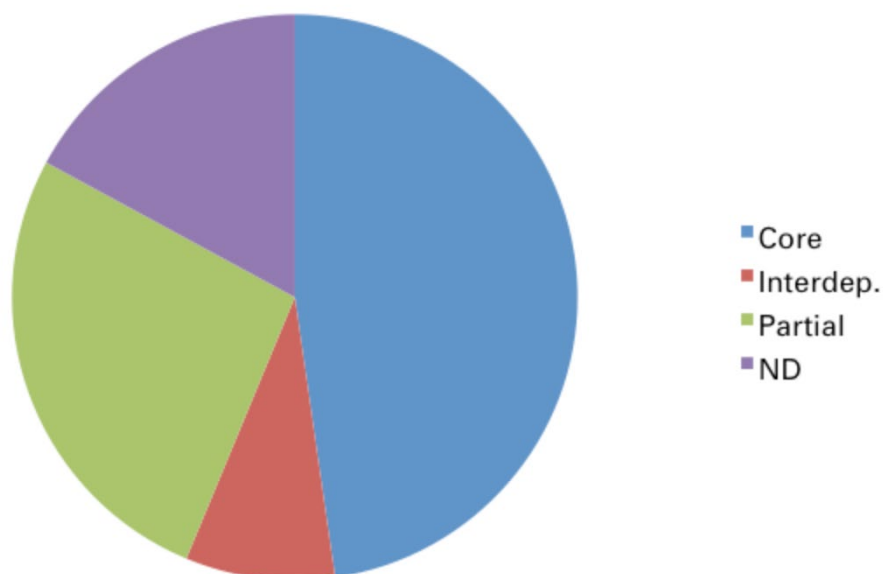
All CIs therefore account for **7.02 per cent of GDP** (7.57 per cent of total value added). This proportion is high but it also shows that, relatively speaking, the probable potential of the core CIs does not contribute as much as the rest of the value chain, given that almost 50 per cent of this value 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 reduce 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
<b>TOTAL</b>	<b>Total for branches</b>	<b>25,495.1</b>		<b>25,495.1</b>
				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
<b>TOTAL</b>	<b>Total for branches</b>	<b>25,495.1</b>		<b>25,495.1</b>
				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
<b>TOTAL</b>	<b>Total for branches</b>	<b>25,495.1</b>		<b>25,495.1</b>
				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
<b>TOTAL</b>	<b>Total for branches</b>	<b>27,090.5</b>		<b>27,090.5</b>
				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
	<b>Total for branches</b>	<b>27,090.5</b>		<b>27,090.5</b>
<b>TOTAL</b>				<b>0.31%</b>

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
<b>TOTAL</b>	<b>Total for branches</b>	<b>27,090.5</b>		<b>27,090.5</b>
				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**

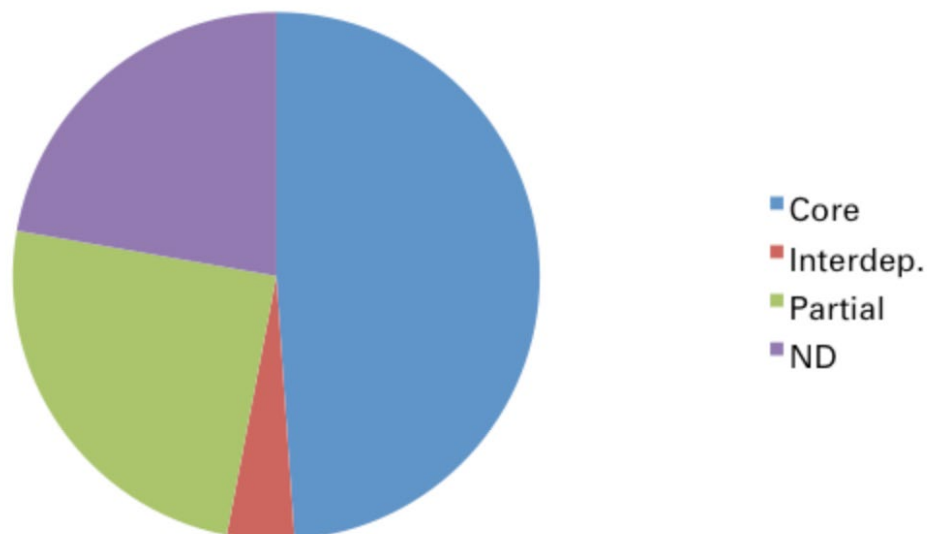
(in thousands of jobs)

		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
<b>TOTAL</b>	<b>Total for branches</b>	<b>27,090.5</b>		<b>27,090.5</b>
				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**

**FTE employment - 7.29%**



### 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 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.

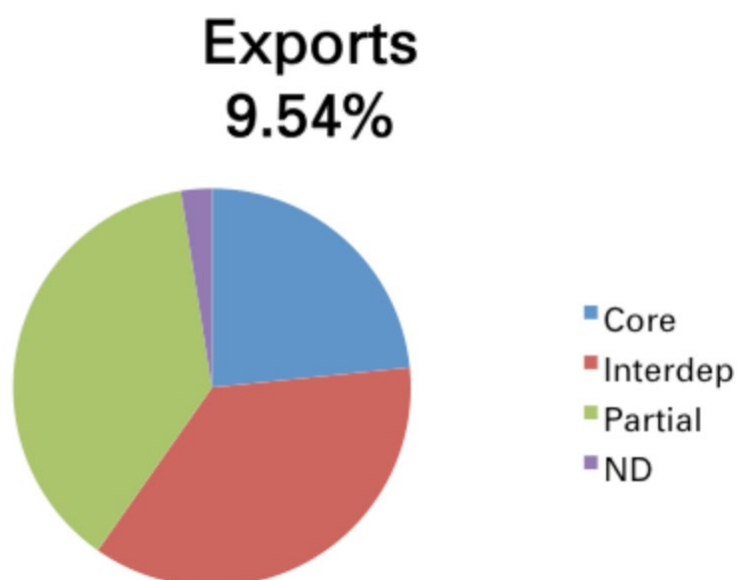
**Table 2.8.d. Export of non-dedicated support CIs (less territorial correction)**

(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.

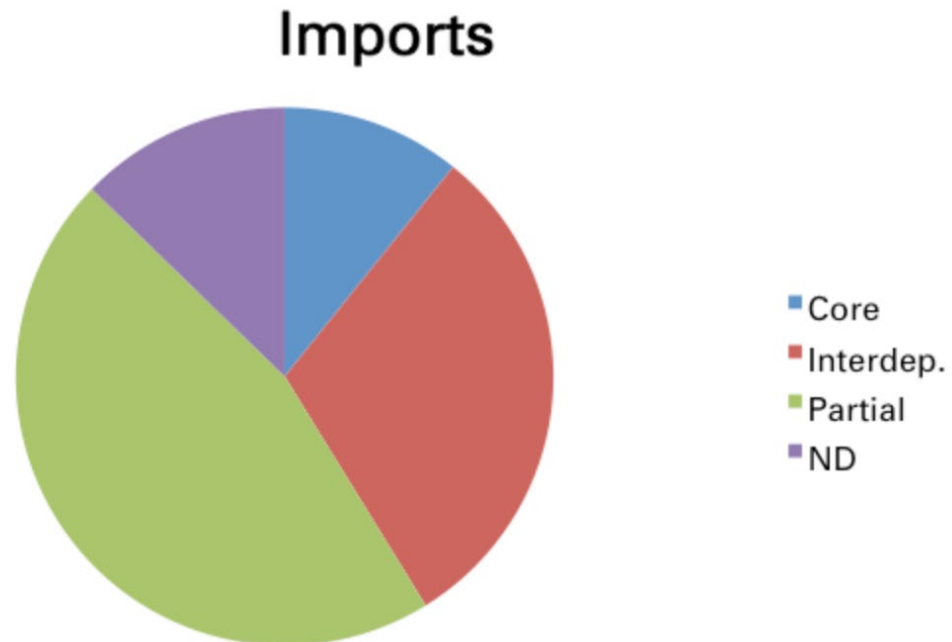
**Table 2.9.d. Imports of non-dedicated support CIs**

(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

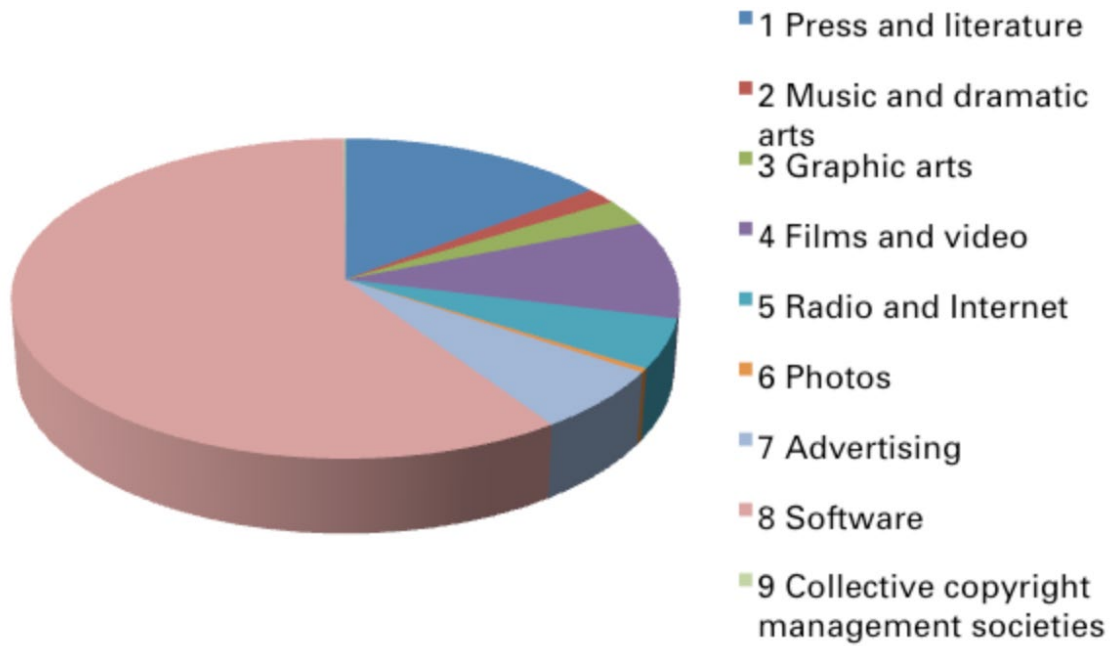
It is not always easy to match Tables 2.11 and Charts 5 and 6, which are based on the French study, with the WIPO data. There are two reasons for this difficulty. Firstly, is difficult to determine the contribution of collective copyright management societies. A highly reliable imaginary value has therefore 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

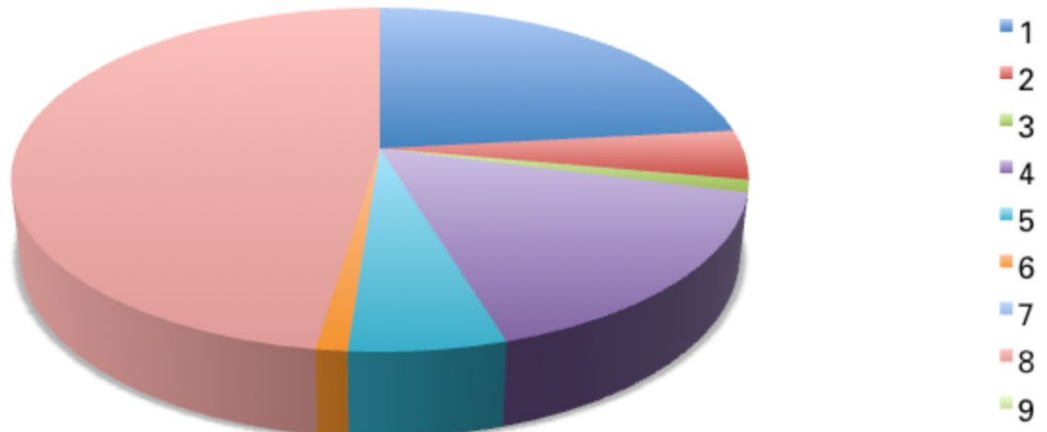
**Chart 2.5. Distribution of main activities (value added)**



**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.

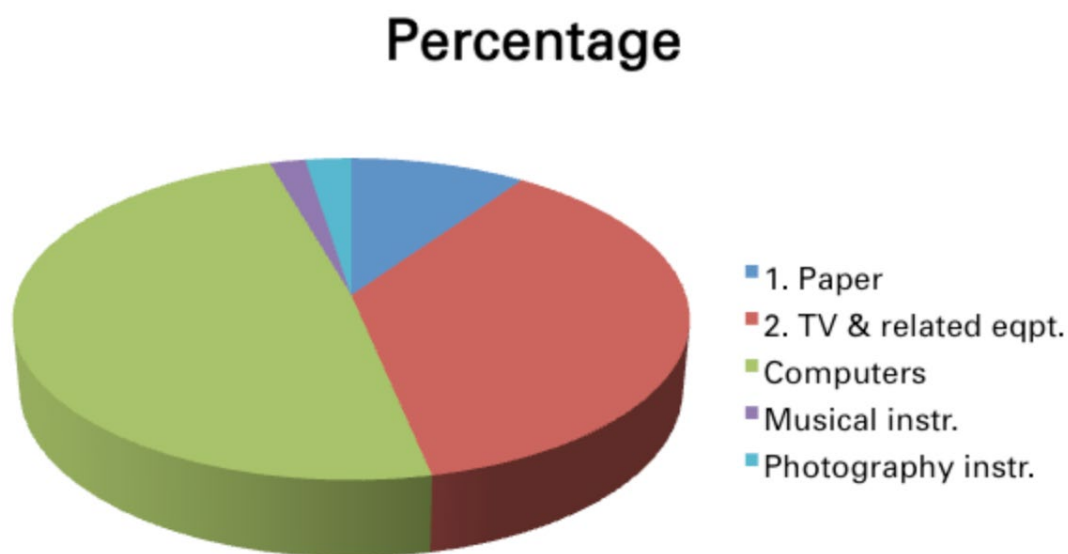
Two points stand out in Tables 2.12.a and b:

- “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

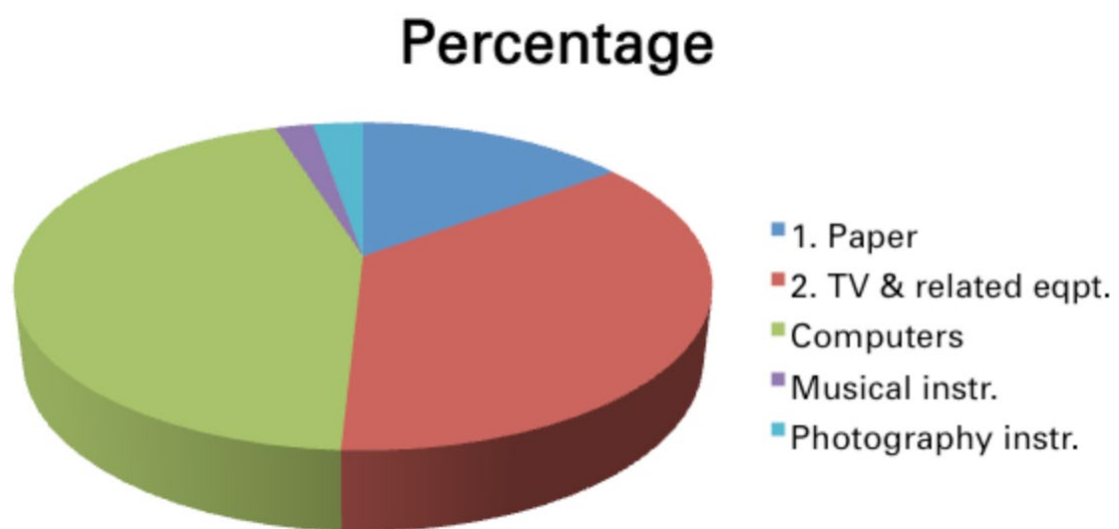
**Chart 2.7. Relative share of value added of the two main groups of interdependent CIs**



**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.

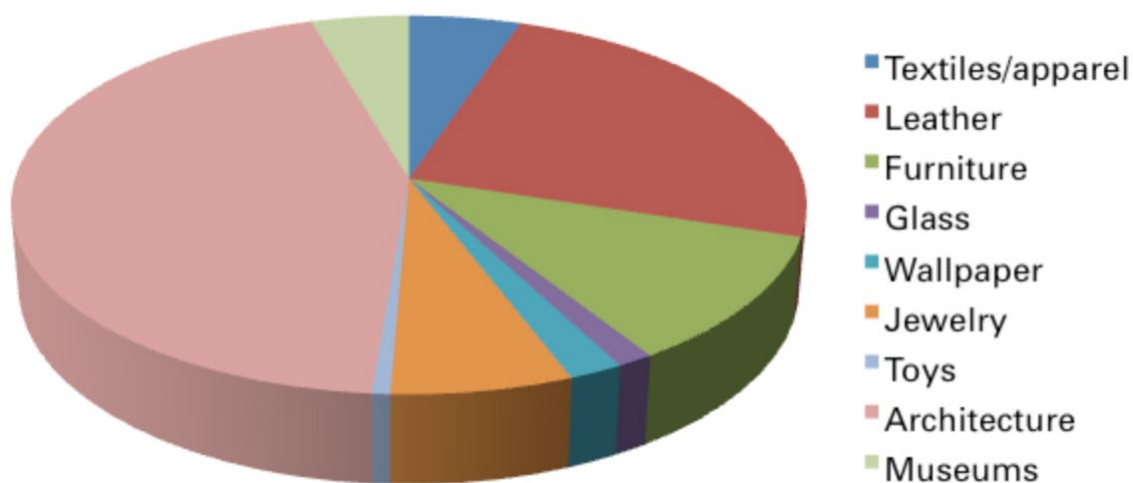
Several lessons can be drawn from Tables 2.13.a and b:

- 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%

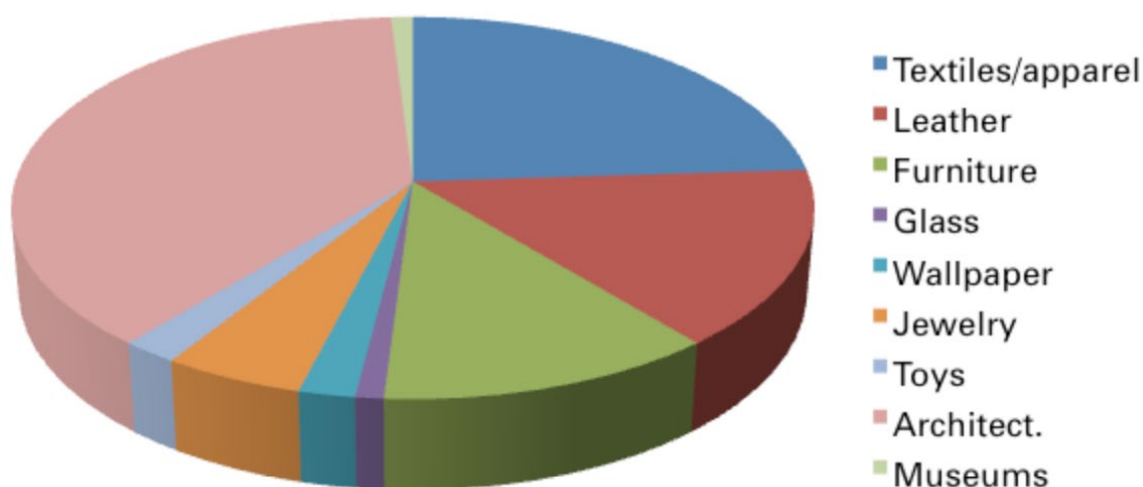
**Chart 2.9. Relative share of value added of the main groups of partial CIs**



**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:

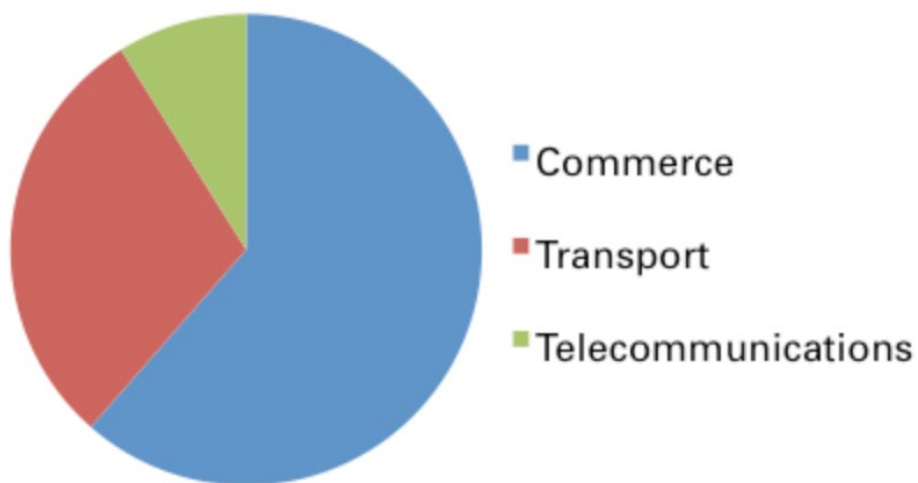
- in terms of value added, the largest sector is commerce, far ahead of transport and telecommunications; and
- in terms of FTE employment, there is a reversal of the two largest items, with telecommunications lagging behind, regardless of the indicator used.

**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



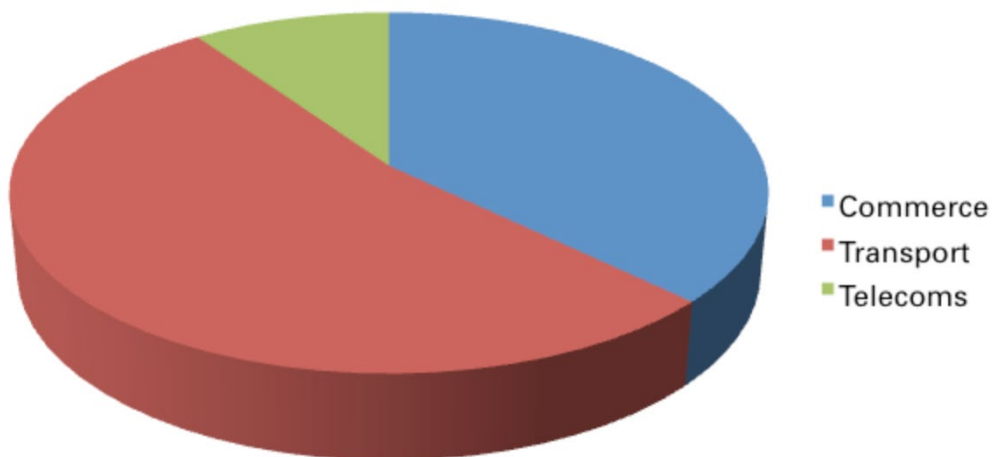
**Chart 2.11. Relative share of value added of non-dedicated support CIs**



**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.<sup>3</sup> 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).

<sup>3</sup> (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)**

<b>Audiovisual:</b>
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
<b>Architecture:</b>
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
<b>Advertising</b>
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
<b>Cultural education:</b>
85.52Z – Cultural education
Live performance:
90.01Z – Performing arts
90.02Z – Support activities to performing arts
90.04Z – Operation of arts facilities
<b>Heritage:</b>
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.<sup>4</sup> 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 that 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
<b>Turnover</b>	<b>19.8</b>	<b>8.6</b>	<b>8.4</b>	<b>4.4</b>	<b>14.9</b>	<b>1.6</b>	<b>5</b>	<b>5.6</b>	<b>10.7</b>	<b>74,618</b>
Direct	18.7	6.0	6.0	4.0	10,000	1.3	3.6	5,095	10,400	<b>61,425</b>
Others	1.1	2.6	2.4	1.0	4,000	0.3	1.4	520	300	<b>13,193</b>
<b>Employment</b>	<b>307,000</b>	<b>240,874</b>	<b>267,713</b>	<b>105,890</b>	<b>176,467</b>	<b>17,450</b>	<b>23,635</b>	<b>79,613</b>	<b>101,933</b>	<b>1,228,255</b>
Direct	298,000	233,000	249,000	102,000	134,900	16,500	18,500	71,416	89,514	<b>1,124,089</b>
Others	9,000	7,000	18,000	4,000	41,500	950	5,135	8,197	12,419	<b>104,166</b>

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

<sup>4</sup> *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/Culturechiffres-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.<sup>5</sup>

#### 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
<b>Total</b>	<b>57.8</b>	<b>3.2</b>

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.

<sup>5</sup> 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%
<b>Grand total</b>	<b>655,841</b>	<b>668,977</b>	<b>2.0%</b>	<b>100%</b>	<b>2.5%</b>

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
<b>Total CIs</b>	<b>102.6</b>	<b>110.2</b>	<b>116.2</b>	<b>123.5</b>	<b>122.0</b>	<b>125.1</b>	<b>133.1</b>	<b>135.1</b>	<b>141.4</b>	<b>146.9</b>	<b>139.6</b>	<b>140.5</b>	<b>144.0</b>

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
<b>% CIs</b>	<b>7.53</b>	<b>7.60</b>	<b>7.69</b>	<b>7.99</b>	<b>7.66</b>	<b>6.63</b>	<b>6.84</b>	<b>7.49</b>	<b>7.49</b>	<b>7.61</b>	<b>7.40</b>	<b>7.37</b>	<b>7.28</b>

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
<b>(C+P)</b>	<b>6.08</b>	<b>6.21</b>	<b>6.22</b>	<b>6.22</b>	<b>6.22</b>	<b>6.13</b>	<b>6.09</b>	<b>6.19</b>	<b>6.21</b>	<b>6.31</b>	<b>6.12</b>	<b>6.15</b>	<b>6.10</b>

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
<b>(I + C)</b>	<b>1.45</b>	<b>1.39</b>	<b>1.47</b>	<b>1.77</b>	<b>1.44</b>	<b>0.50</b>	<b>0.75</b>	<b>1.30</b>	<b>1.28</b>	<b>1.30</b>	<b>1.28</b>	<b>1.22</b>	<b>1.18</b>

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
<b>CIs</b>	<b>1,709</b>	<b>1,806</b>	<b>1,863</b>	<b>1,866</b>	<b>1,863</b>	<b>1,860</b>	<b>1,850</b>	<b>1,877</b>	<b>1,907</b>	<b>1,927</b>	<b>1,887</b>	<b>1,887</b>	<b>1,908</b>

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
<b>CIs</b>	<b>7.28</b>	<b>7.50</b>	<b>7.59</b>	<b>7.55</b>	<b>7.58</b>	<b>7.49</b>	<b>7.40</b>	<b>7.42</b>	<b>7.45</b>	<b>7.48</b>	<b>7.44</b>	<b>7.39</b>	<b>7.49</b>

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
<b>TE</b>	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
<b>TE. Ind.</b>	100	102	104	105	105	105	106	107	109	109	108	107	108
<b>CIs</b>	1709	1806	1863	1866	1863	1860	1850	1877	1907	1927	1887	1887	1908
<b>E. Ind. CIs</b>	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
<b>C + P</b>	<b>5.24</b>	<b>5.46</b>	<b>5.54</b>	<b>5.50</b>	<b>1.93</b>	<b>5.46</b>	<b>5.41</b>	<b>5.44</b>	<b>5.47</b>	<b>5.52</b>	<b>5.49</b>	<b>1.79</b>	<b>5.52</b>

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
<b>I + A</b>	<b>2.04</b>	<b>2.04</b>	<b>2.05</b>	<b>2.05</b>	<b>1.64</b>	<b>2.03</b>	<b>1.99</b>	<b>1.98</b>	<b>1.98</b>	<b>1.96</b>	<b>1.95</b>	<b>1.96</b>	<b>1.97</b>

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	<b>0.02</b>
2001	116.2	1863	0.062	102	<b>0.02</b>
2002	123.5	1866	0.066	106	<b>0.06</b>
2003	122	1863	0.065	99	<b>0.01</b>
2004	125.1	1860	0.067	103	<b>0.03</b>
2005	133.1	1850	0.072	107	<b>0.07</b>
2006	135.1	1877	0.072	100	<b>0.00</b>
2007	141.4	1907	0.074	103	<b>0.03</b>
2008	146.9	1927	0.076	103	<b>0.03</b>
2009	139.6	1887	0.074	97	<b>0.03</b>
2010	140.5	1887	0.074	101	<b>0.01</b>
2011	144	1908	0.075	101	<b>0.01</b>

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.<sup>6</sup> 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

<sup>6</sup> 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)

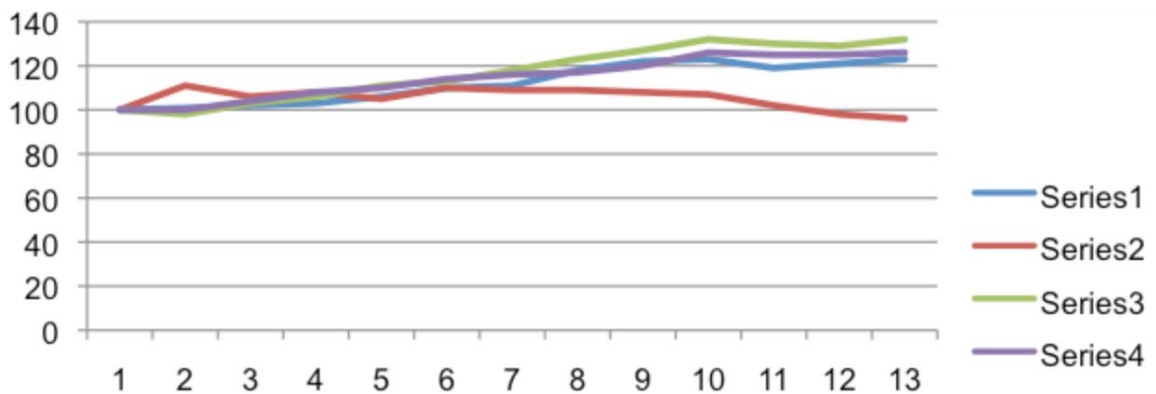
Marginal prod. index: Marginal productivity index for non-dedicated support CIs (apparent productivity of labor)

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	<b>48.1</b>	<b>36.1</b>	7.22	55.32	424.1	13.04%	107	118
2002	<b>46.0</b>	<b>36.9</b>	7.38	53.38	424.4	12.58%	103	118
2003	<b>43.7</b>	<b>34.9</b>	6.98	50.68	411.4	12.32%	98	114
2004	<b>46.1</b>	<b>36.4</b>	7.28	53.38	432.8	12.33%	103	120
2005	<b>48.8</b>	<b>35.4</b>	7.08	55.88	452.9	12.34%	108	126
2006	<b>51.0</b>	<b>36.9</b>	7.38	58.38	485.9	12.01%	113	135
2007	<b>50.8</b>	<b>39.6</b>	7.92	58.72	506.7	11.59%	114	141
2008	<b>53.2</b>	<b>38.5</b>	7.7	60.9	521.0	11.69%	118	145
2009	<b>45.1</b>	<b>35.5</b>	7.1	52.2	440.7	11.85%	101	122
2010	<b>49.1</b>	<b>35.4</b>	7.08	56.18	494.5	11.36%	109	137
2011	<b>53.5</b>	<b>39.2</b>	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 as 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. The 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 been aided by a steady increase in targeted funding and financial assistance from the state.<sup>7</sup>

**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
<b>Total</b>	<b>240</b>	<b>230</b>	<b>261</b>	<b>272</b>	<b>279</b>

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

<sup>7</sup> 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<sup>8</sup> (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 Ch'tis* 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

<sup>8</sup> 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 of 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 viewers 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
<b>Total</b>	<b>273</b>	<b>290</b>	<b>295</b>	<b>320</b>	<b>323</b>

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.<sup>9</sup>

### ***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 imagined, 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.

<sup>9</sup> 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.<sup>10</sup> 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.<sup>11</sup> 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”*.<sup>12</sup> 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

<sup>10</sup> Maraval, V. (2012). *“Les acteurs français sont-ils trop payés?”* [Are French actors overpaid?], *Le Monde*, December 28, 2012.

<sup>11</sup> <http://www.dailymars.net/cinema-francais-la-bombe-de-vincent-maraval-mode-demploi/>.

<sup>12</sup> 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 Éclairer 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 (Déathlon, Promod, La Redoute, Camaïeu International, Okaidi, 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.<sup>13</sup>

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.<sup>14</sup> 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

<sup>13</sup> 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.

<sup>14</sup> *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 recognizes 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.<sup>15</sup>

### 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

<sup>15</sup> 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.<sup>16</sup>

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).<sup>17</sup> 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).<sup>18</sup> 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).

<sup>16</sup> CNC – GfK (2012). *The video game market*.

<sup>17</sup> IDATE, December 2012.

<sup>18</sup> 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).<sup>19</sup>

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.

<sup>19</sup> 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.<sup>20</sup>
- 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.<sup>21</sup>

<sup>20</sup> Information from the *Report of the working group on the video games*, introduced by senators André Gattolin and Bruno Retailleau, 2013.

<sup>21</sup> 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).<sup>22</sup> 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.

<sup>22</sup> 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

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

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

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

**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
	<b>Total core CIs</b>			<b>955.9</b>
	<b>Total for branches</b>	<b>25,468.1</b>		<b>25,468.1</b>
	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
	<b>Total Interdependent CIs</b>			<b>78.31</b>
	<b>Total of branches</b>	<b>25,468.1</b>		<b>25,468.0</b>
<b>TOTAL</b>				<b>0.31</b>

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

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

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
<b>TOTAL</b>	<b>Total for branches</b>	<b>25,495.1</b>		<b>25,495.1</b>
				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 (continued)**

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				<b>0.145</b>
a732	1392Z	Manufacture of made-up textile articles, except apparel	12,151.0	0.29	<b>0.5</b>	0.145	
a88	14	Manufacture of wearing apparel	39,706.0				<b>0.54</b>
a732	1411Z	Manufacture of leather clothes	559.0	0.01	<b>0.6</b>	0.006	
a732	1412Z	Manufacture of workwear	1,822.0	0.05	<b>0.6</b>	0.030	
a732	1413Z	Manufacture of other outerwear	17,160.0	0.43	<b>0.6</b>	0.30	

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

a732	1414Z	Manufacture of underwear	8,800.0	0.22	<b>0.6</b>	0.13	
a732	1420Z	Manufacture of articles of fur	261.0	0.005	<b>0.6</b>	0.003	
a732	1431Z	Manufacture of knitted and crocheted hosiery	4,154.0	0.12	<b>0.6</b>	0.07	
a88	15	Manufacture of leather and related products	22,188.0				<b>0.77</b>
a732	1512Z	Manufacture of luggage, handbags and the like, saddlery and harness	14,253.0	0.63	<b>0.9</b>	0.57	
a732	1520Z	Manufacture of footwear	6,354.0	0.3	<b>0.6</b>	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				<b>0.21</b>
a732	1621Z	Manufacture of veneer sheets and wood-based panels	6,219.0	0.1	<b>0.3</b>	0.03	
a732	1622Z	Manufacture of assembled parquet floors	1,147.0	0.03	<b>0.3</b>	0.009	
a732	1623Z	Manufacture of other builders' carpentry and joinery	20,001.0	0.32	<b>0.3</b>	0.096	
a732	1624Z	Manufacture of wooden containers	12,087.0	0.19	<b>0.3</b>	0.057	
a732	1629Z	Manufacture of other products of wood; manufacture of articles of cork, straw and plaiting materials	4,943.0	0.07	<b>0.3</b>	0.021	
a88	17	Manufacture of paper and paper products	62,771.0				<b>0.11</b>
a732	1711Z	Manufacture of pulp	1,014.0	0.016	<b>0.5</b>	0.008	
a732	1722Z	Manufacture of household and sanitary goods and of toilet requisites	7,096.0	0.12	<b>0.5</b>	0.06	
a732	1723Z	Manufacture of paper stationery	4,638.0	0.07	<b>0.5</b>	0.035	
a732	1724Z	Manufacture of wallpaper	169.0	0.003	<b>0.5</b>	0.0015	
a732	1729Z	Manufacture of other articles of paper and paperboard	6,804.0	0.011	<b>0.5</b>	0.0055	
a88	18	Printing and reproduction of recorded media	65,525.0				<b>0.03</b>
a732	1814Z	Binding and related services	4,099.0	0.06	<b>0.5</b>	0.03	
a88	23	Manufacture of other non-metallic mineral products	110,144.0				<b>0.093</b>
a732	2319Z	Manufacture and processing of other glass, including technical glassware	2,489.0	0.023	<b>0.5</b>	0.012	
a732	2341Z	Manufacture of ceramic household and ornamental articles	3,212.0	0.029	<b>0.5</b>	0.015	
a732	2349Z	Manufacture of other ceramic products	S	0.02	<b>0.5</b>	0.01	
a732	2370Z	Cutting, shaping and finishing of stone	7,420.0	0.07	<b>0.8</b>	0.056	
a88	25.0	Manufacture of fabricated metal products, except machinery and equipment	292,768.0				<b>0.035</b>
a732	2599A	Manufacture of household fabricated metal articles	2,540.0	0.008	<b>0.8</b>	0.006	
a732	2599B	Manufacture of other fabricated metal articles	14,010.0	0.048	<b>0.6</b>	0.029	
a88	32	Other manufacturing	62,440.0				<b>0.014</b>
a732	3212Z	Manufacture of jewelry and related articles	5,264.0	0.016	<b>0.8</b>	0.013	
a732	3213Z	Manufacture of imitation jewelry and related articles	1,631.0	0.006	<b>0.6</b>	0.001	
a732	3240Z	Manufacture of games and toys	1,788.0	0.007	<b>0.8</b>	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				<b>0.023</b>
a732	4624Z	Wholesale (intercompany trade) of hides, skins and leather	674.0	0.001	<b>0.6</b>	0.0005	
a732	4642Z	Wholesale (intercompany trade) of clothing and footwear	29,532.0	0.03	<b>0.6</b>	0.018	
a732	4648Z	Wholesale (intercompany trade) of watches and jewelry	3,664.0	0.01	<b>0.6</b>	0.006	
a88	47	Retail trade, except of motor vehicles and motorcycles	1,345,136.0				<b>0.028</b>
a732	4753Z	Retail sale of carpets, rugs, wall and floor coverings in specialized stores	4,559.0	0.003	<b>0.7</b>	0.0021	
a732	4765Z	Retail sale of games and toys in specialized stores	7,333.0	0.006	<b>0.7</b>	0.004	
a732	4771Z	Retail sale of clothing in specialized stores	S	0.005	<b>0.7</b>	0.003	
a615	4772	Retail sale of footwear and leather goods in specialized stores	29,561.0	0.021	<b>0.7</b>	0.015	
a732	4777Z	Retail sale of watches and jewelry in specialized stores	14,977.0	0.01	<b>0.4</b>	0.004	
a88	71	Architectural and engineering activities; technical testing and analysis	299,422.0				<b>0.62</b>
a732	7111Z	Architectural activities	32,311.0	0.11	<b>0.9</b>	0.099	
a732	7112B	Engineering, technical studies	194,631.0	0.65	<b>0.8</b>	0.52	
a88	91	Libraries, archives, museums and other cultural activities	4,346.0	1	<b>0.8</b>	0.8	<b>0.8</b>

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
<b>TOTAL</b>	<b>Total of branches</b>

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. 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
	<b>Total Interdependent CIs</b>
<b>TOTAL</b>	<b>Total for branches</b>

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
	<b>Total Partial CIs</b>
<b>TOTAL</b>	<b>Total for branches</b>

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
<b>TOTAL</b>	<b>Total for branches</b>
	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
<b>TOTAL</b>	
	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
	<b>Total intermediate CIs</b>
	<b>Total of branches</b>

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
	<b>Total for branches</b>

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
	<b>Total for branches</b>

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
	<b>Total core CIs</b>

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	<b>47.4</b>	100	100
2001	7.2	18	19	3.9	<b>48.1</b>	103	102
2002	7.0	16	19	4	<b>46.0</b>	97	102
2003	6.8	14	18.8	4.1	<b>43.7</b>	99	99
2004	7.4	15	19.3	4.4	<b>46.1</b>	109	104
2005	8.0	16	20.3	4.5	<b>48.8</b>	107	109
2006	7.8	17	21.6	4.6	<b>51.0</b>	98	117
2007	7.8	16	22.4	4.6	<b>50.8</b>	95	122
2008	10.4	15	23.2	4.6	<b>53.2</b>	103	125
2009	7.0	12	21.5	4.6	<b>45.1</b>	93	106
2010	7.1	14	23.3	4.7	<b>49.1</b>	100	119
2011	8.3	15	25.3	4.9	<b>53.5</b>	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



# The Economic Contribution of Copyright Industries in the Republic of Moldova



*Authors*  
Adrian Lupusor  
Ion Tiganas

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## Abbreviations

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AGEPI	– State Agency for Intellectual Property Protection
CI	– copyright industry
CMO	– collective management organizations
CPA	– classification of products by activity
EC	– European Commission
EU	– European Union
FTE	– full-time equivalent
GDP	– gross domestic product
GVA	– gross value added
IT	– information technologies
LFS	– labor force survey
NACE	– Classification of Economic Activities in the European Community
NBM	– National Bank of Moldova
NBS	– National Bureau of Statistics
TRIPS	– Agreement on Trade-Related Aspects of Intellectual Property Rights
VAT	– value added tax
VP	– value of production
WIPO	– World Intellectual Property Organization



## Glossary

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**Copyright activity** denotes the sector of economic activity as defined by the four-digit NACE code classification. Codes are assigned (according to the WIPO Guide) either wholly, in the case of copyright types, or partially, in the case of the copyright industries.

**Copyright factor** measures the degree to which certain economic activities are attributed to copyright.

**Copyright industries** cover all production in the literary, scientific and artistic domains, whatever the mode or format of expression.<sup>1</sup> For the purpose of this report, the copyright industries include all economic activities mentioned in Annex A that bear any relation to copyright.

**Copyright type** refers to the agreement of the Working Group of Experts, which met in July 2002 in Helsinki, on a possible categorization of the copyright-based industries into four main groups: core copyright industries; interdependent copyright industries; partial copyright industries; and non-dedicated support industries.

**FTE employment** is used to ensure statistical comparability and to avoid double-counting the parts of the labor force that are employed in several simultaneous jobs. It is calculated using the ratio of the total hours of paid work to the total number of working hours for the same period. Thus, one FTE unit is equivalent to one employee working full-time.

**Gross domestic product (GDP)** is the key macroeconomic aggregate used by the System of National Accounts. It measures all production activity of resident productive units and thus encapsulates the total value of goods and services produced by these units for final consumption.

**Gross value added (GVA)** is a balancing item of the production account. It measures the difference between the value of goods and services for intermediate consumption (assessed using the purchaser's prices) and those finally produced (assessed using basic prices). It therefore represents the new value created in the production process. GVA includes both the formal and informal economy. As a result of data limitations, GVA estimates in this report do not include the Transnistrian region.

**Intermediate consumption (IC)** measures the value of goods and services (except the consumption of fixed capital) which are transformed or totally consumed during the production process. It incorporates the NBS's estimates for the informal economy. As a result of data limitations, IC estimates in this report do not include the Transnistrian region.

**Labor Force Survey (LFS)** is conducted in Moldova in line with current international recommendations for labor force statistics, adopted by the International Labor Organization (ILO). With some exceptions, the LFS methodology corresponds to the EU Regulation on Labor Force Survey for EU countries. The LFS is conducted on a quarterly basis as a continuous survey, collecting data describing the size and structure of the labor force. As a result of data limitations, LFS data in this report exclude the Transnistrian region.

**Labor productivity** measures value generated per employee and is calculated by dividing GVA by the number of employees in FTE employment.

**Productivity index** is similar to labor productivity. The only difference is that it is based on the ratio of a sector's share in total GVA to the sector's share of the labor force. The ratio is then multiplied by 100. It has better comparability than labor productivity across sectors and countries.

**Sharing coefficient** is used to account for those economic activities that are assigned to two or more types of copyright, otherwise known as 'shared activities'. The sharing coefficient therefore eliminates any double-counting by adjusting data in proportion to its contribution to output, employment or foreign trade.

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<sup>1</sup> Guide on Surveying the Economic Contribution of the Copyright-Based Industries, WIPO, 2003.

**Value of production (VP)** is a measure of all goods manufactured and services rendered during a reporting period, including estimates for the informal economy. It is the sum of GVA plus the value of goods and services for intermediate consumption. As a result of data limitations, VP estimates in this report do not include the Transnistrian region.

**WIPO Guide**<sup>2</sup> provides information and recommendations for research teams and copyright professionals embarking on the stimulating and challenging study of the contribution of copyright-based industries to national economies. This publication is intended as a practical tool to facilitate national and regional surveys. The Guide sets out the main legal, economic and statistical concepts underpinning the survey.

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<sup>2</sup> Guide on Surveying the Economic Contribution of the Copyright-Based Industries, WIPO, 2003.

## Executive summary

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*This section summarizes the legal background of the copyright industries in Moldova, the methodology used in computing the economic contribution of the copyright industries, and the key findings and policy recommendations of this report.*

Copyright legislation has undergone extensive transformation since the Republic of Moldova declared its independence in 1991. By proclaiming the private ownership of production factors and guaranteeing fundamental human rights, the Constitution also laid the foundation for the structural reform of the legal framework for copyright. Thus, only a few months after the Constitution came into force, the Law on Copyright and Related Rights was passed, based on provisions of international conventions and European Directives in force at the time. It subsequently began a continuous process of transformation that culminated in the 2010 adoption of a new Law on Copyright, incorporating the key European Union (EU) Directives applicable at that time. The process of harmonization with EU norms is ongoing and subject to the commitments of the recently signed Association Agreement between Moldova and the EU. Overall, Moldova has developed a relatively adequate legal framework for the protection of intellectual property rights. Hence, all economic activities that form the copyright industries are protected by Moldova's copyright regulations (see Annex A).

This report estimates the relative weight of Moldova's copyright industries in the nation's economy in terms of key macroeconomic indicators: gross domestic product, gross value added, employment and foreign trade (import-export) in goods and services. It is the result of intensive research and statistical analysis and offers a clear and comprehensive picture of the economic contribution of the copyright industries in Moldova. The usefulness of this exercise is fully actuated when applied to the design of appropriate economic and legal policies aimed at further developing the industry.

The estimates provided in the report were largely based on the methodology suggested in the WIPO Guide,<sup>3</sup> adjusted only for data limitations and domestic peculiarities. The main reference for the report was a similar study conducted in Lithuania. The estimation process consisted of: (i) classifying copyright activities using the four types: core, interdependent, partial and non-dedicated support; (ii) collecting data; (iii) estimating sharing coefficients and copyright factors; and (iv) calculating the economic contribution of copyright industries. The key results are presented in Tables 1 and 2 below.

In 2013, the GVA of the copyright industries was approximately 3.33 billion lei (264.32 million US dollars). This represents 3.98 per cent of the total national GVA – a slight drop on the 2008 share of 4.07 per cent. The contribution of the copyright industries' GVA to GDP<sup>4</sup> also declined slightly from 3.35 per cent in 2008 to 3.31 per cent in 2013. These levels are relatively low compared to other countries in the region, with Moldova outpaced by Romania, Russia and Hungary. The structure of the copyright industries in Moldova is also slightly different from comparable countries given the relatively high concentration of core activities (making up 66.86 per cent of total estimated GVA in 2013). At the same time, the contributions of interdependent, non-dedicated support and, especially, partial copyright activities are relatively low.

The copyright industries employ about 39,280 people (in FTE), according to the 2013 estimate. This represents a moderate increase over the period under analysis (2008 = 35,720 people). The industry therefore made up 3.58 per cent of the employed labor force, showing upward movement between 2008 and 2012 but then declining in 2013. Comparing this with other countries in the region, the figures appear relatively modest; indeed, Moldova is outsized by most countries in the region (e.g. Romania, Bulgaria and Russia). Of the four types of copyright industries, the main employers are the core copyright industries (69.29 per cent in 2013) followed by the non-dedicated support industries (15.07 per cent), the interdependent industries (9.26 per cent) and the partial industries (6.38 per cent). Despite their relatively small size, the Moldovan copyright industries have achieved gains in efficiency. Labor productivity is significantly higher than the national average and is rising strongly, especially since 2011. Moreover, again taking its relatively small size into account, labor productivity in the copyright industries is close to the regional mean.

<sup>3</sup> Guide on Surveying the Economic Contribution of the Copyright-Based Industries, World Intellectual Property Organization, 2003.

<sup>4</sup> The share of GVA in GDP is smaller than the share of GVA in total GVA, because GDP is net of the taxes that are included in GVA and thus the denominator is larger. Unfortunately, it is not possible to estimate net tax at such a high level of disaggregation. Hence, the authors followed the approach of most similar studies, computing the share of GVA generated by the copyright-based industries in GDP of the country.

The analysis of foreign trade highlighted significant differences between copyright goods and copyright services. The copyright goods industry faces urgent competitiveness issues and suffers from high sensitivity to external shocks. In 2014, total exports of copyright goods generated approximately 399.80 million lei (28.48 million US dollars), accounting for a tiny share of GDP (0.36 per cent in 2014, down from 0.61 per cent in 2008) and posting a mediocre performance during the review period. However, Moldova imports 14 times more copyright goods than it exports. In 2014, the volume of copyright imports was valued at approximately 3.2 billion lei (227.54 million US dollars), which is equivalent to about 2.6 per cent of GDP. Unlike exports, the volume of imports of copyright goods also grew constantly over the same period. This widening gap between exports and imports has fueled a negative trade balance for the copyright industries of about 2.8 billion lei (199.06 million US dollars). There are also structural differences between the export and import of copyright goods. Partial copyright goods are the most exported copyright goods (65.42 per cent), followed by interdependent copyright goods (27.78 per cent) and core copyright goods (6.81 per cent). The interdependent copyright industries imported the largest proportion of copyright goods (69.46 per cent) in 2014, followed by the partial copyright industries (19.94 per cent) and the core copyright industries (10.60 per cent).

Unlike the foreign trade in copyright goods, the balance of trade in copyright services is positive and even increased during the review period, revealing competitiveness gains in the copyright services industry. By 2014, exports had surged to 3.6 times their 2008 volume, reaching 1.08 billion lei (76.96 million US dollars), equating to a two-fold increase in the contribution to GDP (0.5 per cent to 1.0 per cent). During the same period, imports also increased, albeit at a slower pace, only reaching 2.3 times their 2008 volume (2014 = 787.72 million lei, or 56.11 million US dollars), equating to an increase in GDP share from 0.4 per cent in 2008 to 0.7 per cent in 2014. The growing competitiveness of copyright services seen between 2008 and 2014 resulted entirely from the Computer and Information Services sector, which accounted for 92.64 per cent of total exports of copyright services in 2014. These exports were 2.7 times higher over the period. The Computer and Information Services sector also imports the greatest proportion of copyright services (75.69 per cent), 3.59 times higher during the 2008-2014 period.

**Table 1: Contribution of CI to GDP, GVA, employment and foreign trade, per cent**

	2008	2009	2010	2011	2012	2013	2014
<b>Gross value added</b>	4.07	4.02	3.91	3.69	4.00	3.98	N/A
<b>Gross domestic product</b>	3.35	3.38	3.26	3.06	3.34	3.31	N/A
<b>Employment</b>	3.02	3.41	3.60	3.71	3.78	3.58	N/A
<b>Exports</b>	4.69	5.70	6.08	6.76	7.46	7.53	8.63
Exports of goods	2.24	1.54	1.46	1.47	1.43	1.36	1.21
Exports of services	3.39	4.74	5.27	5.90	6.59	6.82	8.02
<b>Imports</b>	6.61	8.27	8.76	8.07	9.32	9.48	9.54
Imports of goods	4.24	4.48	4.82	4.60	4.38	4.25	4.33
Imports of services	2.91	4.24	4.42	3.93	5.38	5.70	5.67

Source: Calculated by the authors based on NBS data.

**Table 2: Size of CI GVA, employment and foreign trade compared to the national economy**

	2008	2009	2010	2011	2012	2013	2014
<b>Gross value added (CI), billion MDL</b>	2,106.19	2,041.38	2,340.19	2,522.45	2,949.07	3,327.95	N/A
<b>Gross value added (total economy), billion MDL</b>	51,773.55	50,809.19	59,920.69	68,389.56	73,686.10	83,719.48	N/A
<b>Employment (CI), thousands (FTE)</b>	35.72	37.86	38.60	41.96	40.98	39.28	N/A
<b>Employment (total economy), thousands (FTE)</b>	1,183.48	1,110.50	1,071.33	1,131.14	1,083.0	1,098.45	N/A
<b>Exports (CI), million MDL</b>	678.05	583.57	729.82	990.42	1,105	1,269.89	1,479.59
Exports of goods (CI), million lei	381.22	228.71	285.99	393.77	384.93	421.81	399.80
Exports of services (CI), million lei	296.83	354.86	443.83	596.65	720.07	848.08	1,079.79
<b>Imports (CI), million lei</b>	2,387.05	1,970.26	2,647.82	3,157.47	3,319.17	3,620.35	3,982.12
Imports of goods (CI), million lei	2,134.07	1,634.36	2,263.54	2,775.08	2,737.42	2,923.01	3,194.40
Imports of services (CI), million lei	252.98	335.90	384.28	382.39	581.75	697.34	787.72
<b>Exports (total economy), million lei</b>	25,867.78	22,227.24	28,081.64	36,838.81	37,917.85	43,487.27	46,481.77
Exports of goods (total economy), million lei	17,100.08	14,746.70	19,667.73	26,734.19	26,992.52	31,050.68	33,019.96
Exports of services (total economy), million lei	8,767.70	7,480.54	8,413.91	10,104.62	10,925.33	12,436.59	13,461.81
<b>Imports (total economy), million lei</b>	59,313.24	44,326.69	55,817.89	70,148.17	73,225.52	80,842.5	87,804.55
Imports of goods (total economy), million lei	50,616.50	36,404.39	47,114.12	60,411.98	62,410.90	68,602.07	73,899.68
Imports of services (total economy), million lei	8,696.74	7,922.30	8,703.77	9,736.19	10,814.62	12,240.43	13,904.87

Source: Calculated by the authors based on NBS data.

These estimates have important policy implications. The key policy recommendations are as follows:

- Policy measures in the copyright sector should primarily focus on raising efficiency and boosting value added. This focus is especially relevant for copyright goods, which are significantly less competitive than copyright services.
- Efficiency improvements are most needed in the core copyright industries and could be introduced either by increasing value added or by optimizing employment in industries with largely state-owned capital (especially press and literature and radio and television).
- As a large share of copyright activities are already concentrated in the core copyright industries compared to other countries in the region, policy measures aimed at the other three types of copyright industries (interdependent, partial and non-dedicated support) should focus on increasing their size (e.g., added value, employment and exports).
- In addressing software and database copyright activity (the largest copyright industry in Moldova in terms of GVA and the second largest in terms of employment), adjustments need to be made to the existing tax structure, with a greater focusing on incentives to invest and to improve efficiency.

- In addressing press and literature (the second largest copyright activity in terms of GVA and the largest in terms of employment), bold policy measures should aim to reform the structure of the industry (i.e., improving investment attractiveness, boosting productivity and competitiveness, with a focus on increased value added in the library and archives sector).
- Advertising services (the third largest copyright industry in terms of GVA and the fourth largest in terms of employment), as with other copyright industries, could benefit greatly from horizontal policy measures related to the enforcement of copyright regulations and a more effective protection of intellectual property rights.
- Other more specific recommendations include improving copyright statistics, conducting annual assessments of the economic contribution of the copyright industries, intensifying research in the field of copyright factors, strengthening the institutional setting for copyright protection, developing the National Strategy on Creative Industries Development, providing support to small and medium enterprises that deal with copyright, strengthening tax legislation and the Law on Copyright and Related Rights and developing the collective management of copyright.

## Introduction

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*This section presents the background, purpose and objectives of the study, as well as some notes on its structure and methodology. It also explains the importance of adequately measuring the copyright industries' contribution to the national economy.*

The copyright industries are gaining increased attention in the context of global digitalization, technological and cultural change and globalization, all of which directly affect the Republic of Moldova. The leading economic and social roles played by information technology, software and hardware, and by the creative and cultural industries, are fueling the rising need for efficient copyright protection.

Moreover, in an increasingly competitive world, the sustainability of any economic system is directly related to a country's capacity to generate, integrate and ameliorate innovation and play an active role in technological development. This is especially important for countries with small domestic markets and limited resources, such as Moldova. Given these constraints, the best approach is to encourage technological progress, which is of course conditional on the level of copyright protection.

The importance of the copyright sector for Moldova is two-fold. Firstly, it has great potential to generate value added, decent jobs, exports and tax revenue. Secondly, it is a vital national instrument for modernizing technology and enhancing competitiveness.

Policies are therefore needed to draw benefit from both of these functions. In order to help unleash the industry's potential and to leverage systemic spillovers from the copyright sector for the entire economy, policies should be grounded on a clear set of indicators measuring the trends and performance of the copyright industries.

The World Intellectual Property Organization (WIPO) has supported countries in compiling statistics on their copyright industries and measuring the contribution to economies by financing national studies with those specific objectives. It also provides policy makers and local researchers with methodological assistance in measuring the size of copyright industries and their impact on economic growth. Hence, in 2003, it developed the WIPO Guide on Surveying the Economic Contribution of the Copyright-based Industries.<sup>5</sup> To date, the WIPO Guide and technical and financial assistance have helped 44 countries undertake efforts to measure the size and economic contribution of their national copyright industries. The Republic of Moldova will be the 45<sup>th</sup> country to do so.

**The purpose** of the study is to delineate the economic characteristics of the copyright industries in Moldova and thereby encourage evidence-based policies aimed at the sustainable development of the sector.

The **specific objectives** of the study are as follows:

- Estimate the contribution of copyright industries to the national economy, specifically to gross domestic product, gross value added, employment and foreign trade;
- Analyze the performance and development of the copyright industries in recent years;
- Provide a feasible and transparent methodology for estimating and monitoring the performance of copyright industries and their contribution to economic growth (one which could be replicated in other countries);
- Identify the strongest copyright industries in order to fine-tune specific policies in this area; and
- Identify policy recommendations for strengthening the copyright sector and increasing the economic role of copyright industries in Moldova.

This is the first study to provide a comprehensive view of the economic role of the copyright industries in the Republic of Moldova through the lenses of GDP, employment and foreign trade, estimated using a robust methodology. The report is data-rich and can therefore serve as a sound basis for the government to design a development strategy for the copyright sector and other sector-specific policies, laws and regulations.

<sup>5</sup> Guide on Surveying the Economic Contribution of the Copyright-Based Industries, World Intellectual Property Organization, 2003.

Moreover, the report can be used to raise awareness and for advocacy centering on the importance of the copyright sector and the protection of intellectual property rights.

The study is based on the methodology set out in the WIPO Guide, which has been adapted to data constraints and domestic peculiarities. Thus, the copyright industries have been classified according to four types: (i) core; (ii) interdependent; (iii) partial; and (iv) non-dedicated support. Each type comprises the specific economic activities as defined by the four-digit NACE classification (rev. 1.1).

The principal source of data was the National Bureau of Statistics, which made a substantial contribution to estimating the economic contribution of copyright-based industries. Additionally, the authors referred to the analytical approaches of similar studies conducted in comparable countries, especially Lithuania, Bulgaria and Romania.

The report is divided into three main chapters. The first chapter provides a brief history and current overview of the copyright industries, the legal framework, the government's international commitments and the institutional landscape of the area.

The second chapter provides data analysis regarding the contribution of the copyright industries to: (i) gross domestic product and gross value added; (ii) employment; and (iii) foreign trade (exports and imports) in goods and services.

The third chapter describes the three most important copyright sectors: (i) software and databases; (ii) press and literature; and (iii) advertising services. Individual calculations of the contribution to GDP, GVA, employment and foreign trade are presented for each of the sectors.

Additionally, a fourth chapter sets out key conclusions and policy recommendations based on data from the second and third chapters. Their overarching aim is the elimination of development constraints and the strengthening of the copyright sector.

The report also contains several annexes. Annex A provides detailed methodological notes with descriptions of the datasets, all of the estimation steps and the adjustments to the WIPO methodology made in light of data availability and other constraints. Annex B provides statistical tables with estimates of contributions to GDP, GVA, employment and foreign trade of goods and services for each copyright activity for the 2008-2013 period (2008-2014 for foreign trade statistics). Annexes C, D and E present estimates on copyright factors related to apparel, textiles and footwear products, footwear and other partial copyright activities.



# 1. The Copyright Industries in Moldova: An Overview

*This section considers copyright regulation in the Republic of Moldova, describing its evolution, offering a functional assessment, discussing its correlation with EU directives and analyzing the relevance of the current regulatory framework protecting economic activities with a direct or partial contribution to the copyright industries.*

## 1.1 A brief history of copyright in the Republic of Moldova

Until the declaration of Moldova's independence in 1991 and the adoption of national legislation, the legal copyright regime had been regulated by Title 4 of the Civil Code of the Moldavian Soviet Socialist Republic.<sup>6</sup> The code provided for a low level of protection for authors of works but no rights at all for performers and subjects of related rights. At the same time, while it contained detailed procedures for standardized copyright contracts, it ignored the legal status of some copyright objects, exceptions and limitations relating to economic rights, collective management systems and legal measures for copyright protection.

The introduction of private ownership of production factors and the guarantee of fundamental human rights facilitated the radical reform of the copyright legal framework. Only a few months after the entry into force of the Constitution of the Republic of Moldova, the Law on Copyright and Related Rights<sup>7</sup> was adopted. The law borrowed from the provisions of international conventions and European directives in force at the time. The resulting framework made authors the main subjects of copyright relations by guaranteeing their moral rights, granting them the exclusive economic rights to their creations, and regulating the mechanisms to protect their rights.

The first significant adjustments to this copyright law followed Moldova's ratification of the Rome Convention and the WIPO Treaties in 1996. The new provisions were crafted to correspond to the 'digital era', in particular through the introduction of new categories of rights related to the use of works (including interactive works) in the digital environment, an extension to the level of protection, the systematization of legal norms and the incorporation of limitations and exceptions.

On July 2, 2010, the Law on Copyright and Related Rights<sup>8</sup> was adopted (hereinafter 'the Law on Copyright'). The legal framework for copyright in the Republic of Moldova also comprises other laws and regulations (such as the Law on the Distribution of Copies of Works and Phonograms,<sup>9</sup> the Regulation on the State Registration of the Works Protected by Copyright and Related Rights<sup>10</sup> and the Regulation on Minimum Rates of Copyright Remunerations,<sup>11</sup> and others<sup>12</sup>).

## 1.2 International and EU copyright and related rights legislation

At the time of writing, the Republic of Moldova was party to several international conventions governing copyright and related rights (see Table 3).

<sup>6</sup> Civil Code of the Moldavian Soviet Socialist Republic, December 26, 1964.

<sup>7</sup> Law on Copyright and Related Rights, November 23, 1994, Official Gazette No. 13/1995.

<sup>8</sup> Law on Copyright and Related Rights, July 2, 2010, Official Gazette No. 191-193 / 2010.

<sup>9</sup> Law on Distribution of Copies of Works and Phonograms, November 14, 2002, Official Gazette No. 11-13/2003.

<sup>10</sup> Government Decision on Registration of Objects of Copyright and Related Rights, February 10, 2012, Official Gazette No. 34-37/2012.

<sup>11</sup> Government Decision on Minimum Rates of Copyright Remunerations, 12 July 2001, Official Gazette No. 81-83/2001.

<sup>12</sup> Law on Publishing, Law on Architectural Activity, Law on Advertising, Law on Press, Law on Cinematography, Law on Libraries, Customs Code, Broadcasting Code, etc.

**Table 3: The international conventions governing CI signed by Moldova**

	Name of international treaty	Date of signature	Date of enactment by Moldova	Act of ratification
<b>Multilateral treaties</b>				
1	Berne Convention for the Protection of Literary and Artistic Works	September 9, 1886	November 2, 1995	Parliament Decision No. 511/1995
2	Universal Copyright Convention	September 6, 1952	June 23, 1997	Parliament Decision No. 1318/1993
3	International Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations	October 26, 1961	December 5, 1995	Parliament Decision No. 510/1995
4	Convention Establishing the World Intellectual Property Organization	July 14, 1967	December 25, 1991	Parliament Decision No. 1328/1993
5	Convention for the Protection of Producers of Phonograms against Unauthorized Duplication of their Phonograms	October 29, 1971	July 17, 2000	Parliament Decision No. 796/2000
6	Brussels Convention Relating to the Distribution of Program-Carrying Signals Transmitted by Satellite	May 21, 1974	October 28, 2008	Law No. 117/2008
7	Agreement on Trade Related Aspects of Intellectual Property Rights	April 15, 1994	July 26, 2001	Law No. 218/2000
8	WIPO Copyright Treaty	December 20, 1996	March 6, 2002	Parliament Decision No. 1452/1998
9	WIPO Performances and Phonograms Treaty	December 20, 1996	May 20, 2002	Parliament Decision No. 1452/1998
10	Beijing Treaty on Audiovisual Performances	June 24, 2012	Not in force	Not ratified
11	Marrakesh Treaty to Facilitate Access to Published Works by Visually Impaired Persons and Persons with Print Disabilities	June 27, 2013	Not in force	Not ratified
<b>Regional treaties</b>				
12	Agreement on Cooperation in the Field of Protection of Copyright and Neighboring Rights	September 24, 1993	May 9, 1999	Parliament Decision No. 206/1998
13	Agreement on Cooperation for Combating Violations in the Area of Intellectual Property	March 6, 1998	November 20, 2001	Parliament Decision No. 1245/2001
14	Agreement on Cooperation in the Field of Legal Protection and Defense of Intellectual Property and Creation of the Interstate Council on Legal Protection and Defense of Intellectual Property	November 19, 2010	June 24, 2011	Parliament Decision No. 442/2011

The government therefore has a wide range of international commitments in the copyright sector, which augurs well for the further strengthening of Moldova’s copyright protection system. Extant copyright law also encompasses the following elements of European legislation:

1. Council directive 93/83/EC of September 27, 1993 on the Coordination of Certain Rules Concerning Copyright and Rights Related to Copyright Applicable to Satellite Broadcasting and Cable Retransmission.
2. Directive 96/9/EC of the European Parliament and of the Council of March 11, 1996 on the Legal Protection of Databases.
3. Directive 2001/29/EC of the European Parliament and of the Council of May 22, 2001 on the Harmonization of Certain Aspects of Copyright and Related Rights in the Information Society.
4. Directive 2001/84/EC of the European Parliament and of the Council of September 27, 2001 on the Resale Right for the Benefit of the Author of an Original Work of Art.

5. Directive 2004/48/EC of the European Parliament and of the Council of April 29, 2004 on the Enforcement of Intellectual Property Rights.
6. Directive 2006/115/EC of the European Parliament and of the Council of December 12, 2006 on Rental Right and Lending Right and on Certain Rights Related to Copyright in the Field of Intellectual Property.
7. Directive 2006/116/EC of the European Parliament and of the Council of December 12, 2006 on the Term of Protection of Copyright and Certain Related Rights.
8. Directive 2009/24/EC of the European Parliament and of the Council of April 23, 2009 on the Legal Protection of Computer Programs.

The harmonization of copyright legislation with EU standards is an ongoing process. On July 2, 2014, Moldova signed an Association Agreement<sup>13</sup> with the European Union, thereby committing itself to the progressive assimilation of EU legislation in the field of copyright and related rights and to its effective implementation.

### 1.3 Subject matter of copyright protection

The Law on Copyright governs the relations that arise from the creation and use of literary, artistic and scientific works (copyright), performances, phonograms, videograms and broadcasts (related rights) and other rights acknowledged as being connected to intellectual activity in the field of literature, arts and science.

To be protected by the copyright system, a work must be original or be the result of creative activity and be embodied in a form of expression. National legislation protects intellectual creations regardless of the means of creation, the form of expression, the value or importance of the work. No other criteria, such as any quantitative, qualitative or aesthetic characteristics are applied in determining eligibility for protection.

Under the Law on Copyright, the originality of the work lies not only in reflecting a minimum intellectual effort, but also in bearing the stamp of the author's personality. Establishing originality is a factual matter and is at the sole discretion of a judge.

Literary, artistic and scientific works can be expressed in written format (manuscripts, scores), oral format (public recitations), audio or video format (mechanical, digital recordings), figurative format (drawings, sketches, plans), three-dimensional format (sculpture, mock-up) or any other possible format.

Article 7 of the Law on Copyright lists the protectable intellectual creations, including literary works, scientific works, dramatic works, musical works, choreographic works, audiovisual works, works of fine art, works of architecture, town planning and park and garden design, works of applied arts, photographic works, maps, plans, sketches and three-dimensional works relating to geography, topography, architecture and other scientific fields.

In line with Article 10 of the TRIPS Agreement, computer programs are protected as literary works and enjoy the same legal status. Components protected by copyright include the preparatory design material, the source code, the object code and the user manual.

Photographic works are a combination of mechanical, physical and chemical characteristics, the result of which is transposed onto a physical medium. Photographs are protected to the extent that they show originality and are the expression of the author's personality. At the same time, the creation, reproduction, modification and distribution of photographic works containing portraits is allowed only with the consent of the individual represented.

Works of applied art benefit from double protection. They are artistic creations that use aesthetic elements to confer identity to industrially produced utilitarian goods. Protection is granted to cover the external aspects as determined by features such as lines, contours or shape. Any component part or other element of the work (including the title or characters within the work) embodying an intellectual creation is also protected by copyright.

<sup>13</sup> Law ratifying the Association Agreement between the Republic of Moldova, on the one hand, and the European Union and the European Atomic Energy Community and the Member States, on the other hand, 2 July 2014, Official Gazette No. 185-199/2014.

Without prejudice to the rights of the author of the original work, copyright protection is also granted to any derived or composite works based on one or more works or other materials, namely translations, adaptations and other transformations of works and collections of literary, artistic or scientific works (encyclopedias, compilations, including databases), provided they are the result of intellectual activity.

At the same time, copyright law clearly sets forth that protection extends neither to ideas, theories, scientific discoveries, procedures, methods of functioning or mathematical concepts as such, nor to the inventions comprised in a work, regardless of the mode of capture, explanation or expression. Also, copyright protection is not granted to official normative, administrative or political documents or the official translations thereof, state emblems and official signs, folklore expressions, daily news or various facts of simple informational nature.

#### 1.4 Author of the work

According to the legal definition, the author is deemed to be the natural person whose intellectual activity led to the creation of a work. This status arises at the time of the creation of the work and no registration, notification or other formality is required for the existence and exercise of copyright. A legal entity cannot hold authorship, given its lack of creative ability. By virtue of the transfer of rights, however, it can manage the economic rights to a work.

The copyright to a work that is the result of a joint creative effort of two or more persons is shared among the authors, whether the work forms an indivisible whole or a composition of parts. Each of the authors maintains copyright to the part of the work that he/she created, and if that part is independent, it may be used as its author sees fit. A part of a work is considered to be independent if it can be recovered independently from the rest of the composite work. The relations between the joint authors are regularly covered by a contract. In the absence of such a contract, all the authors enjoy a joint share of the copyright and the corresponding remuneration is divided in proportion to each individual contribution, where ascertainable. Where the individual contributions of joint authors cannot be determined, remuneration is divided equally.

For audiovisual works, the principal directors, scriptwriters, dialogue-writers, composers, camera operators, set decorators and other authors contributing in a creative manner to the production of a work are recognized as joint authors. Unless otherwise covered by law or a contract, the creation of an audiovisual work implies that the joint authors assign all exclusive rights of exploitation of the audiovisual work to its producer in exchange for equitable remuneration.

The moral rights to a work created during the completion of a task by an employee or service provider (service creation) belong to the author of the work. The author of the work is not, however, granted the right to prohibit the employer from publishing or making the work available to the public by other means. In the case of service creations, however, the copyright is assigned to the employer, unless otherwise agreed in a contract.

In the case of collective works (such as encyclopedias, dictionaries or other similar publications, newspapers, magazines and other periodicals), the economic rights go to the natural person or legal entity behind the initiative and direction and under whose name or designation it has been published. Nevertheless, unless otherwise stipulated in their contracts, the authors of works included in collective works keep the rights to their own work and may exploit it independently of the collective work.

The public can be informed of the rights of a copyright holder through the use of the copyright notice (i.e., the © symbol, alongside the name of the holder of the exclusive rights and the year of the first publication of the work), which should appear on every copy of the work.

The holder of exclusive rights in a work, published or otherwise, may also enforce those rights by means of an entry in an official register at any time during the term of copyright protection. The act of registration, however, does not imply the presumption of authorship.

#### 1.5 Moral rights and economic rights

'Moral right' is the legal term describing the link that unites the work and its creator. Moral rights are assigned exclusively to natural persons and cannot be waived or assigned, even where the author has assigned the

economic rights. Moral rights are protected without limitation in time and may be exercised as long as the work is used and remains in people's memory. Furthermore, given that non-economic copyrights are intangible, they are implicitly inalienable.

Article 10 of the Law on Copyright assigns to the author the following moral rights:

- The right to disclose the work;
- The right of authorship;
- The right to be named;
- The right to respect for the integrity of the work; and
- The right to withdraw the work.

Economic rights are linked to the person of the author but may be assigned or licensed to third parties. The legal nature of these rights confers exclusivity for a limited period of time. While not necessarily the most important benefit, material gain is one of the motives for creative activity, hence copyright law assigns to the author or copyright holder the exclusive right to perform, authorize or prohibit the exploitation of the work through the following acts:

- Reproduction of the work;
- Distribution of the original or copies of the work;
- Rental of copies of the work;
- Lending copies of the work;
- Importing copies of the work for the purposes of distribution;
- Presentation of the work in public;
- Public performance of the work;
- Communication of the work to the public;
- Simultaneous retransmission of the work without modifications;
- Making the work interactive and available to the public;
- Translation of the work; and
- Transformation or other modification of the work.

Works of graphic or plastic art (pictures, collages, paintings, drawings, engravings, prints, lithographs, sculptures, tapestries, ceramics, glassware and photographs) differ considerably, as the author enjoys two additional economic rights. The right of access can be exercised by the author, where necessary, to reproduce the work. The right of resale entitles the author or his/her successor to a remuneration amounting to five per cent of the resale price, for each resale of an original work of art, subsequent to the initial transfer by the author. The resale right is inalienable during the author's lifetime and may only be transferred to legal or testamentary heirs of the author, for the duration of copyright protection.

## 1.6 Limitations and exceptions

The existence of exceptions and limitations is subject to compliance with the 'three-step test' of copyright law. These three cumulative conditions stipulate that exceptions and limitations must: (i) be limited to special cases; (ii) not contravene the normal use of a work or enter into economic competition with the exercise of rights by the rightholders; and (iii) not prejudice the legitimate interests of the rightholders.

**'Limitation'** means that a right, although in force, is reduced in a particular aspect and that the right of the author is restricted to the payment of remuneration.

Reproducing a work without the consent of the author is referred to as private copying. It is subject to the payment of an equitable remuneration, provided it is done by a natural person exclusively for his/her own use and for purposes that are neither directly nor indirectly commercial. Only collective management organizations are entitled to collect this remuneration and do so from the producers and importers of equipment (audio, video recorders, disk drives) and media (CD, DVD) used for such reproduction.

The remuneration is then to be distributed among the holders of rights whose works are deemed to have been reproduced for personal use. Private copying cannot be applied to electronic databases, computer programs, works of architecture in the forms of buildings, complete books or audiovisual works during public performance.

Reprographic reproduction refers to the facsimile reproduction of the original of a literary or graphic work, whether in the same format, enlarged or reduced, by means of photocopying or with the aid of other similar technical means, except those of publishing. Reprographic reproduction does not include recording in electronic (including digital) or optical formats or in any other machine-readable format. Libraries, archives and educational institutions can perform reprographic reproduction without the consent of the author and without the payment of remuneration, but subject to the inclusion of a mention of the name(s) of the author(s) and of the lender of the original, and even then only to the extent justified by the institution's aims. Reprographic reproduction can be performed by other types of institution without the consent of the author but a payment of remuneration is due from the producers and importers of the equipment (copiers, scanners) as well as users of equipment in public places.

**'Exception'** to copyright means that a right, set forth by law, is not applicable in certain cases. In these cases, copying neither requires the consent of the author nor entails the payment of remuneration. Exceptions to copyright ensure the balance between copyright and the public interest in culture, education, humanitarianism, justice and an informed society.

Article 28 of the Law on Copyright provides for the use of the following works without the consent of the author and without payment of remuneration: (i) short quotations in other works for such purposes as criticism or review; (ii) works used for illustration in educational publications; (iii) public speeches as well as extracts of public lectures; (iv) works used to ensure public security and the proper performance and reporting of parliamentary, administrative or judiciary proceedings; (v) works benefiting persons with visual impairment; (vi) works of architecture or sculpture located permanently in public places; and (vii) works used for caricature, parody, etc.

### 1.7 Transfer of rights

The Law on Copyright provides general rules on the transfer of rights. By means of a copyright contract, however, the authors or other holders of a copyright may assign the exclusive economic rights and the rights to remuneration to a third party. The assignment makes the assignee the holder of the rights. In addition, exclusive economic rights can be assigned so as to grant either exclusive or non-exclusive licenses. If a license contract does not expressly stipulate that it grants exclusivity, it will be understood to grant a non-exclusive license. Exclusive licenses restrict use of the work to the licensee and to the limits laid down in the contract. Within those limits, the licensee also has the right to authorize or prohibit the use of the work by other persons. Non-exclusive licenses allow the licensee to use the work in the same way as other persons who have obtained authorization to use it, and also within the limits laid down in the contract. In this case, however, the licensee does not have the right to authorize or prohibit the use of the work by other parties.

Article 31 of the Law on Copyright establishes that a copyright contract must be concluded in written form and set out: (i) the uses of the work it covers; (ii) the period of its validity; (iii) the applicable territory; (iv) the amount of remuneration or the basis for determining the amount for each use of the work; (v) the conditions and time limits for payment of the remuneration; and (vi) any other conditions considered essential by the parties. Any clause in a copyright contract that restricts the author's future faculty to create works on a given subject or in a given field is null and void.

### 1.8 Term of protection

The moral rights of authors are protected perpetually and the monitoring of compliance passes eventually to the author's heirs, collective management societies or other duly authorized institutions. Nevertheless, national legislation provides for the expiration of economic rights at the end of a certain period. In general, this term of protection covers the lifetime of the author and extends for 70 years following his/her death. Throughout that 70-year period, the heirs alone enjoy the material advantages resulting from the exploitation of the author's work and have exclusive monopoly on its use.

**Table 4: Protection of property rights and related rights in Moldova**

No.	Objects of copyright and related rights	Term	The term starts as of
1	Literary, artistic or scientific work, with the exceptions below	70 years	the death of the author
2	Works of joint authorship	70 years	the death of the last surviving joint author
3	Anonymous work	70 years	the first publication
4	Critical or scientific publication of a work having fallen into the public domain	30 years	the first publication
5	Work of applied art	25 years	the creation of the work
6	Work having fallen into the public domain, previously unpublished	25 years	the first publication
7	Performance	50 years	the first performance
8	Phonogram	50 years	the first printing
9	Videogram	50 years	the first printing
10	Broadcast of a broadcasting organization	50 years	the first broadcasting

At the time of writing, the State Agency on Intellectual Property (hereinafter AGEPI) was preparing a draft amendment to the Law on Copyright to extend the term of protection for the economic rights of performers and producers of phonograms and videograms and broadcasting organizations. This would bring it into line with Directive 2006/116/EC of the European Parliament and of the Council of 12 December 2006 on the Term of Protection of Copyright and Certain Related Rights.

The expiration of the term of protection of economic rights assigns to the work a new special legal regime, whereby the work falls into the public domain. The work is then considered to be part of world heritage and the regime therefore prohibits holders from invoking the exclusive use of the work and the collection of remuneration. The free use that comes with this change of regime does not, however, imply the right to violate the moral rights of the author.

### 1.9 Collective management of rights

The collective management of copyright and related rights is governed by the Law on Copyright and Government Decision No. 641/2001 on Minimum Rates of Remunerations. Copyright and related rights can be managed independently by each author or performer, or collectively by means of a collective management organization (CMO). In most cases, rightholders in the Republic of Moldova manage their rights collectively, given the advantages the system offers.

At the same time, extended collective management may be used to manage: (i) the right to public performance, communications to the public by air or cable; (ii) the right of retransmission by air and of making interactive and available to the public musical and dramatico-musical works; (iii) the right of reproduction on phonograms of works in those cases where the rightholders concerned have already authorized such reproduction for a producer of phonograms; and (iv) the right of authors, performers and producers of phonograms of making available and interactive to the public their works, performances and phonograms.

The Law on Copyright also provides for the exclusive management by CMOs accredited by AGEPI (mandatory license) of: (i) the right to equitable remuneration for private copying and reprographic reproduction; (ii) the right to equitable remuneration after the transfer of their right of rental to producers of phonograms or audiovisual works; (iii) the right to equitable remuneration for each instance of performance and communication to the public of phonograms published for commercial purposes; (iv) the right to retransmission by cable; and (v) the right of resale.

Under Article 48 of the Law on Copyright, any copyright holder may establish a CMO to administer: (i) a specific type of right on behalf of different categories of rightholders; (ii) various rights on behalf of a single category of rightholders; or (iii) various rights for various categories of rightholders.

CMOs can operate only if they are legally registered as associations and accredited as CMOs by AGEPI. The request for accreditation must demonstrate that: (i) the majority of a candidate CMO's members or rightholders are citizens of the Republic of Moldova; (ii) it has entered into reciprocal representation agreements with similar organizations representing foreign rightholders; (iii) it has the capacity to manage collectively the economic rights concerned, including appropriate staff and technical equipment; (iv) it has at its disposal adequate mechanisms for the collection and distribution of authors' remunerations; (v) it guarantees equal treatment both to rightholders and users; and (vi) its statutes are in accordance with legislative provisions. If more than one CMO submits a request to manage collectively the same categories of rights pertaining to the same categories of rightholders, the AGEPI grants accreditation to the CMO most compliant with the abovementioned conditions.

According to legislation, the rates of royalties are to be negotiated between the CMO and the parties obliged to pay the remuneration or the associations representing them. They must not be less than the minimum rates of royalties, approved by the government or provided for by the Law on Copyright. Where the interested parties cannot agree on the amount of remuneration or other conditions of authorization, either party may apply to the Mediation or Arbitration Body, which is specialized in the field of intellectual property. CMO activity is monitored by AGEPI and in this respect CMOs provide it with copies of contracts concluded with foreign CMOs, decisions of general meetings, balance sheets, annual reports on remunerations paid (disaggregated by holder of copyright and related rights), audit statements, etc.

In addition, AGEPI carries out general annual reviews of CMO activity. Where a CMO is found to be failing to comply with the requirements or not functioning in accordance with the provisions of the law, AGEPI sets a reasonable deadline for the CMO to address the deficiencies. Where a CMO fails to meet the deadline, AGEPI may suspend its activities in accordance with the legislative provisions on public associations. At the time of writing, this measure had only been applied once.

### 1.10 Enforcement of copyright and related rights

The infringement of a right recognized and guaranteed by the Law on Copyright entails civil, administrative or criminal liability, as appropriate.

**Civil measures** grant to any physical person or legal entity rightfully claiming the use of an object of copyright, related rights or other protected rights: the right to institute proceedings before a competent judicial body or to inform an enforcement authority responsible for applying measures, procedures and remedies. The hearing and determination of disputes in the field of copyright and related sectors falls under the jurisdiction of the 45 district courts. Appeals against their decisions are heard by one of the four Courts of Appeal and thereafter by the Supreme Court of Justice.

The Law on Copyright vests judicial bodies with the authority to apply measures, procedures and remedies (measures for preserving evidence, information measures, provisional and precautionary measures, corrective measures, injunctions and alternative measures) in a fair and equitable manner. As such, no measure may be unnecessarily complicated or expensive, or entail unwarranted time limits or delays. The application of measures, procedures and remedies must be effective and proportionate, must not create any barriers to legitimate trade and must ensure the existence of safeguards against abuse.

In judicial proceedings, the rightholder may claim, where appropriate, the acknowledgement of their rights, a statement of infringement and compensation for damages. In determining the damages, the need to recover losses is taken into account, including lost profit. Any unfair profit is surrendered and an indemnity of between 25 and 25,000 euros is levied in respect of the infringed right. At the same time, the aggrieved rightholder may also claim material compensation for the moral prejudice. The most common disputes examined by national courts concern the infringement of the moral and economic rights of a rightholder and the relations that arise from works created in co-authorship or in the execution of duties.

In 2003, an **infringement liability** was introduced for violations of copyright and related rights (Article 96 of the Offences Code), and the responsibility to investigate and prosecute offences and apply punishments was transferred to the jurisdiction of the General Police Inspectorate.

Article 185(1) of the Criminal Code provides for cases where large-scale damages have been caused to a rightholder. The **criminal liability** for such a violation of copyright and related rights for a natural person



may incur punishment in the form of a fine of between 800 and 5,000 euros or imprisonment of three to five years. A legal entity will face a fine of between 2,000 and 10,000 euros and an injunction preventing it from practicing certain activities for a period of one to five years, or its liquidation. Furthermore, Article 246(2) of the Criminal Code regulates the offense of counterfeiting, that is, the manufacturing of products for marketing purposes without the accompanying documentation, documents of origin, quality and compliance with respect to products which are protected by copyright, partially or otherwise. In this case, a natural person may incur a fine of between 1,000 and 2,000 euros or imprisonment of up to one year, and a legal entity a fine of between 3,500 and 5,000 euros and an injunction preventing it from exercising its right to conduct certain activities for a period of one to five years.

National legislation also provides limited jurisdiction to the customs authority, entitling it to seize copies of works, phonograms and videograms imported or exported illegally. Where the copies of are found to be counterfeit, the court may apply to the violator any of the measures provided for by law.

In 2011, the Observatory on Enforcement of Intellectual Property Rights was created to: (i) collect and manage data on the enforcement of rights; (ii) ensure cooperation among public authorities and between them and rightholders; (iii) train representatives of public authorities; and (iv) raise awareness and educate society. The observatory publishes an annual National Report on the protection of intellectual property rights. This analytical publication is based on statistical data on counterfeiting and piracy in Moldova. Additionally, the observatory examines the challenges faced by public authorities and the private sector in protecting intellectual property rights and proposes relevant policy recommendations.

**In conclusion**, Moldova has developed a relatively adequate legal framework for the protection of intellectual property rights. Moldova's copyright regulations protect all economic activities listed in the WIPO Guide and hence the entire copyright industries (see Annex A). The current Law on Copyright is relatively new (adopted in 2010) and takes into account the key provisions of the relevant European Union Directives. Moreover, Moldova is a party to 11 international conventions and three regional treaties governing copyright and related rights. In line with the Association Agreement recently signed with the EU, it will continue to harmonize the legal framework with EU and international standards. This body of rules augurs well for the further development of the copyright sector in Moldova, making it more attractive for investment and integrating it into the national economy and foreign trade.

## 2. Economic Contribution of the Copyright Industries<sup>14</sup>

*This chapter analyses the contribution of the copyright industries to the gross value added (GVA), gross domestic product (GDP), employment and foreign trade of Moldova from 2008 to 2013. The assessment is conducted following an internationally recognized methodology<sup>15</sup> (Annex A) and it shows that while the share of the copyright industries within the national economy is significant, it is relatively low compared to that of other countries in the region. Furthermore, the foreign trade analysis reveals competitiveness flaws in the copyright goods industry but shows that Moldova has a competitive edge in copyright services.*

### 2.1 Note on methodology

The estimates of the economic contribution of the copyright industries (CI) are largely based on the methodology found in the WIPO Guide, which was adjusted to accommodate data limitations and domestic peculiarities. A similar study conducted in 2012 for Lithuania was taken as a benchmark for determining the methodology. The estimation process consisted of the following key steps (see Annex A for more details on the methodology).

1. **Identification of copyright activities:** The list of copyright activities (4-digit NACE 1.1 codes) is based on the WIPO Guide and on the Lithuanian study, which was validated by AGEPI. In accordance with the WIPO Guide, each copyright activity was categorized under: (i) core; (ii) interdependent; (iii) partial; and (iv) non-dedicated support copyright industries.
2. **Data collection:** For each of the identified copyright activities, statistical data was compiled for GDP, GVA, employment and foreign trade in goods and services. The National Statistical Office provided the raw data, which was compiled and validated by the statistician.
3. **Estimation of the sharing coefficients and copyright factors:** Some economic activities are assigned to two or more copyright categories, and are thus named 'shared activities'. In order to avoid double-counting, specific sharing coefficients were assigned to every shared activity and used as a basis for sharing output, employment and foreign trade values under that activity among several copyright types. For the purposes of this study, the sharing coefficients have been replicated from the Lithuanian study, given the data constraints and similarities with the Moldovan economy. The copyright factors, which denote the extent to which certain economic activities are attributed to copyright, were estimated for two types of copyright industries, namely the partial and non-dedicated support copyright industries (the core and interdependent industries have a factor of 1, meaning that they are fully attributed to copyright). The copyright factors for the partial copyright industries were estimated with substantial assistance from AGEPI experts, who attributed copyright factors to each item produced by the top three companies among the major partial copyright activities. The rest of the copyright activities were disaggregated using four-digit NACE codes, to which copyright factors were assigned. The weighted averages of copyright factors for each partial copyright activity were then computed based on the respective production shares in total production. The copyright factors for the non-dedicated support copyright industries were estimated as follows: the value added of the first three types was divided by the gross value added, minus the value added of non-dedicated support copyright industries.
4. **Calculation of the economic contribution of copyright industries.** The compiled datasets were used to compute the contribution of the copyright industries to gross domestic product, gross value added, employment and foreign trade in goods and services for the 2008-2013 period (2008-2014 for foreign trade). In order to factor in inflation, at least partially, estimates have been provided in both Moldovan lei (MDL) and US dollars (USD).

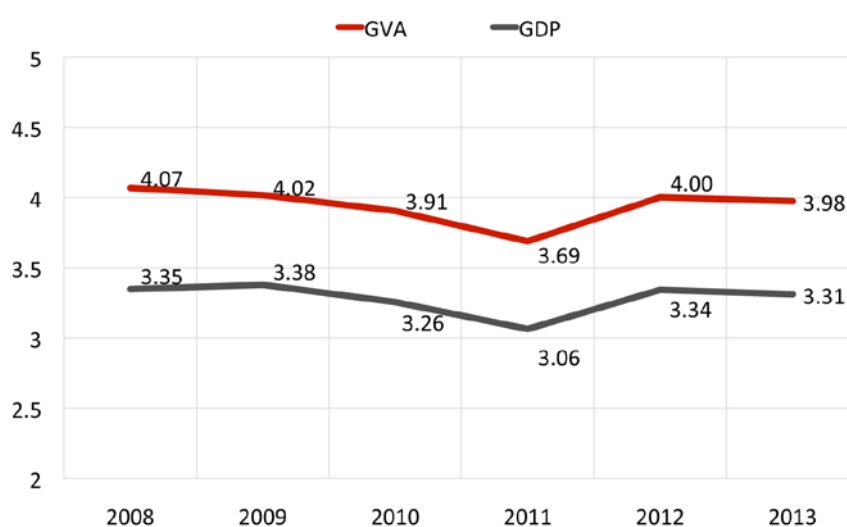
<sup>14</sup> The statistical data and all computations do not cover the region of Transnistria, over which the constitutional authorities of the Republic of Moldova do not have de facto control.

<sup>15</sup> Guide on Surveying the Economic Contribution of the Copyright-Based Industries, World Intellectual Property Organization, 2003.

## 2.2 Contribution to gross value added and gross domestic product

The gross value added created in the copyright industries in 2013 amounted to approximately 3.33 billion Moldavian lei (264.32 million US dollars), representing 3.98 per cent of total GVA generated by the Moldovan economy. This was a slight decline from 2008, when this share was 4.07 per cent. The share of the copyright industries in GDP<sup>16</sup> followed a similar negative trend, also inching down from 3.35 per cent in 2008 to 3.31 per cent in 2013. Overall, CI contributions to GDP and GVA declined, which is an indication that the industry lags behind other industrial sectors in terms of economic growth. This downward trend further indicates that the copyright industries in Moldova follows rather than drives economic growth. Hence, the only growth episodes in its GVA and GDP shares occurred in 2009 (for GDP) and 2012 – years of negative economic growth (Chart 1).

**Chart 1: CI contribution to GVA and GDP (%)**



Source: Calculated by the authors based on NBS data

The most important component of the copyright industries is the core copyright sector. In 2013, core CIs generated 67.86 per cent of the industries' total GVA, followed by the non-dedicated support CIs (14.91 per cent), interdependent CIs (12.64 per cent) and partial CIs (5.59 per cent).

As shown in Table 4, core CIs generated approximately 2.22 billion lei in 2013 – a steady and clearly significant increase over the review period (2008-2013). The other types of CIs also increased in nominal terms, but at lower rates.

**Table 5: CI GVA values by CI type (in thousand lei)**

CI type	2008	2009	2010	2011	2012	2013
Core	1,316,951.2	1,326,500.0	1,535,464.0	1,660,633.8	2,033,272.5	2,224,970.8
Interdependent	277,418.2	228,438.1	280,497.7	312,707.7	302,846.9	420,799.6
Partial	149,126.4	146,114.5	155,655.9	148,566.3	157,532.4	186,062.0
Non-dedicated support	362,690.3	340,328.1	368,570.4	400,538.7	455,420.6	496,116.1
<b>Total</b>	<b>2,106,186.1</b>	<b>2,041,380.6</b>	<b>2,340,188.1</b>	<b>2,522,446.5</b>	<b>2,949,072.4</b>	<b>3,327,948.5</b>

Source: Calculated by the authors based on NBS data

<sup>16</sup> The share of GVA in GDP is smaller than the share of GVA in total GVA, because GDP consists of GVA plus net taxes, and thus the denominator is larger. Unfortunately, it is not possible to estimate net taxes at a high level of disaggregation. Hence, the authors followed the approach of most similar studies by computing the share of GVA generated by the copyright-based industries within the GDP of the country.

Expressed in US dollar terms (to partially adjust for inflation), the overall copyright industries grew by 30.38 per cent in 2013 compared to 2008, with the largest contributions coming from the core and interdependent CIs (+39.41 per cent and +25.17 per cent respectively). The partial and non-dedicated support industries posted modest growth of 2.96 per cent and 12.87 per cent respectively during the same period. The 30.38 per cent growth of the copyright industries during the review period happened despite the national currency depreciating 18 per cent against the US dollar (Table 5).

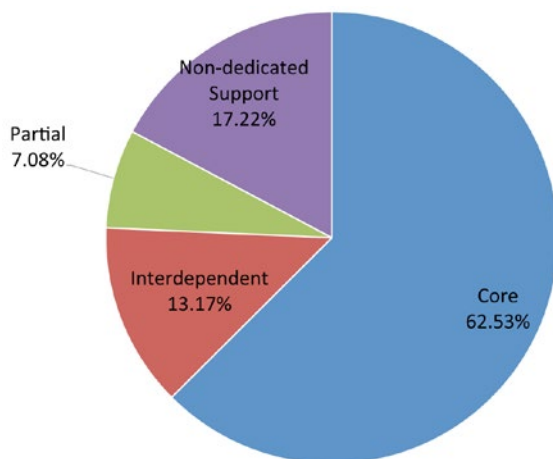
**Table 6: CI GVA values by industry type (in thousand US dollars)**

Industry type	2008	2009	2010	2011	2012	2013
Core	126,757.9	119,360.4	124,165.2	141,487.1	167,869.8	176,715.4
Interdependent	26,701.8	20,555.2	22,682.4	26,642.9	25,003.5	33,421.5
Partial	14,353.6	13,147.6	12,587.1	12,657.9	13,006.1	14,777.7
Non-dedicated, support	34,909.3	30,623.2	29,804.4	34,126.2	37,600.2	39,403.4
<b>Total</b>	<b>202,722.6</b>	<b>183,686.4</b>	<b>189,239.1</b>	<b>214,914.1</b>	<b>243,479.5</b>	<b>264,318.0</b>

Source: Calculated by the authors based on NBS data

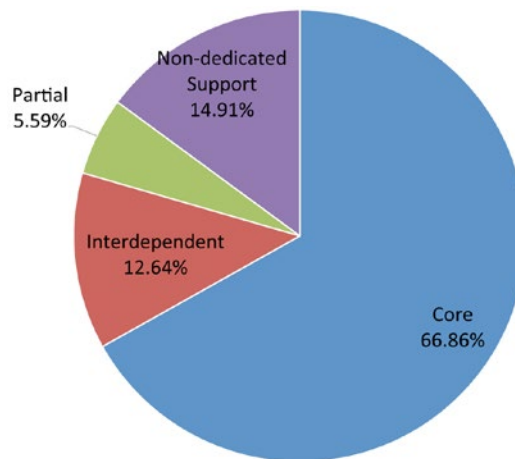
Thus, during 2008-2013, the core copyright sector was the driving force behind the entire copyright sector, increasing its share from 62.53 per cent in 2008 to 67.86 per cent in 2013. During the same period, the respective shares of the other CIs declined from 17.22 to 14.91 per cent for non-dedicated support CIs; from 7.08 to 5.59 per cent for partial CIs; and from 13.17 to 12.64 per cent for interdependent CIs (Chart 2 and Chart 3).

**Chart 2: GVA by CI type in 2008**



Source: Calculated by the authors based on NBS data

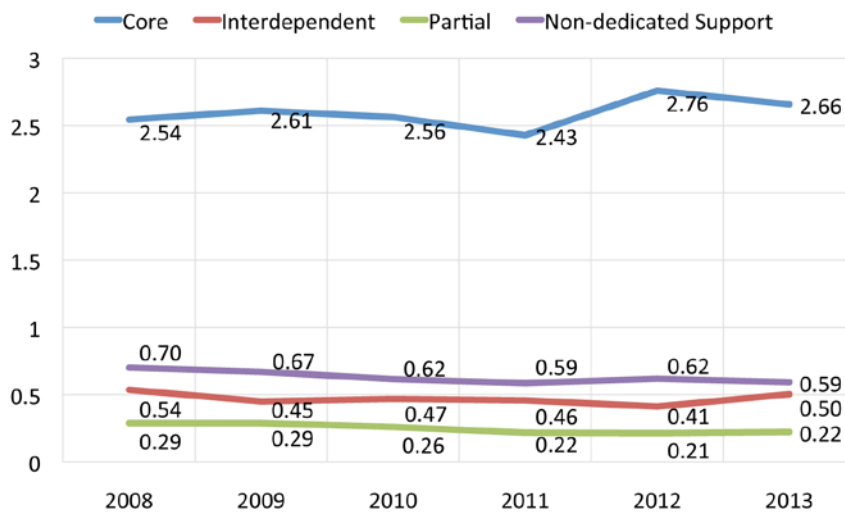
**Chart 3: GVA by CI type in 2013**



Source: Calculated by the authors based on NBS data

Chart 4 confirms the concentration within the copyright sector: the value added share of core CIs in total GVA increased from 2.54 per cent in 2008 to 2.66 per cent in 2013. At the same time, the shares of the other three CI types declined, thus accounting for the decline in the economic contribution of the entire copyright sector.

**Chart 4: CI GVA shares by industry type (%)**



Source: Calculated by the authors based on NBS data

The analysis of the GVA share of CIs in GDP, presented in Table 4, reveals a similar trend: the economic importance of core CIs has been increasing (from 2.09 per cent of GDP in 2008 to 2.21 per cent in 2013) whereas the shares of the other three CI types have declined.

**Table 7: CI contribution to GDP by industry type (%)**

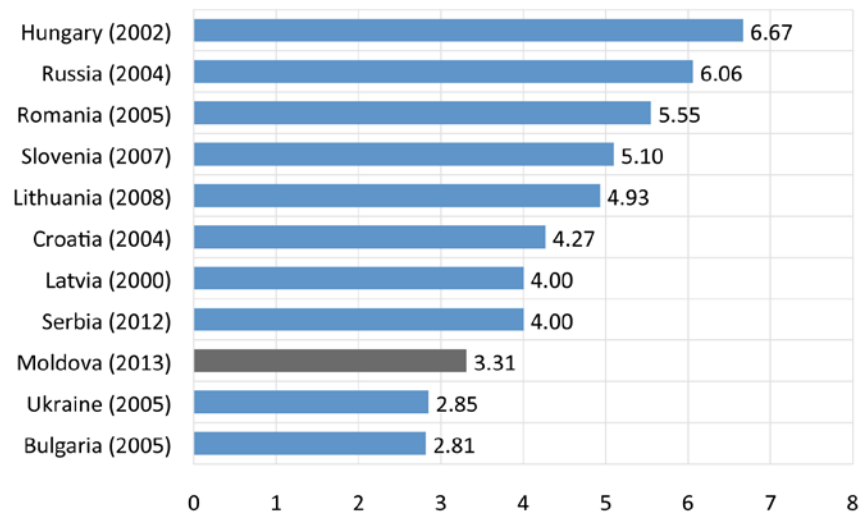
Industry type	2008	2009	2010	2011	2012	2013
Core	2.09	2.20	2.14	2.02	2.30	2.21
Interdependent	0.22	0.17	0.17	0.13	0.15	0.15
Partial	0.15	0.12	0.12	0.15	0.09	0.12
Non-dedicated support	0.00	0.00	0.00	0.00	0.00	0.00

Source: Calculated by the authors based on NBS data

### 2.2.1 Regional comparison

CI contribution to the country's GDP is relatively small compared to the situation in other countries of the region. Moldova's CI contribution to GDP is higher than that of Ukraine (2.85 per cent) and Bulgaria (2.81 per cent), and lower than that of Romania (5.55 per cent), Russia (6.06 per cent), Hungary (6.67 per cent) and many other countries (Chart 5). However, the comparability of these estimates is somehow tainted by the fact that various countries provide data for different years.

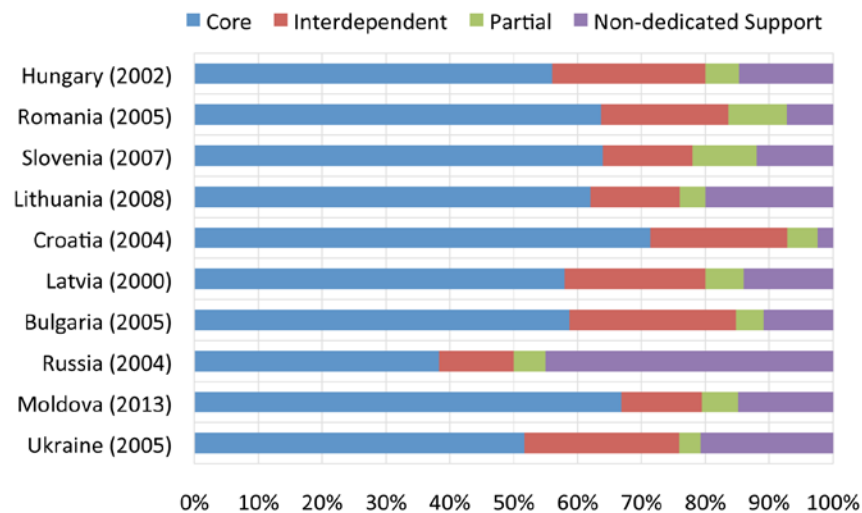
**Chart 5: CI contribution to in GVA (%)**



Source: WIPO and authors' calculations

The copyright industry structure in Moldova is slightly different from the structure in other comparable countries. The key difference is the relatively high concentration of core CIs (67.3 per cent of the total GVA, estimated for 2013), while interdependent, non-dedicated support and, especially, partial CIs make a relatively low contribution (Chart 6).

**Chart 6: CI GVA by industry type**



Source: WIPO and authors' calculations

### 2.2.2 Core CI contribution to GVA and GDP

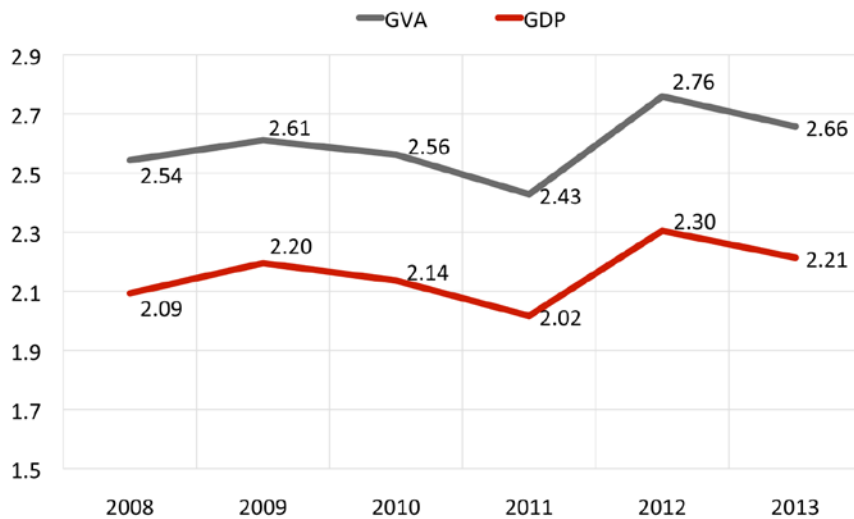
Core CIs are industries that are wholly engaged in the creation, production and manufacturing, performance, broadcast, communication and exhibition, or distribution and sale of works and other protected subject matter.<sup>17</sup>

Core CIs account for approximately 66.86 per cent of the overall copyright industries GVA, generating approximately 2.2 billion lei (176.7 million US dollars) (2013) in total. They equally account for 2.66 per cent of the economy's total GVA and 2.21 per cent of the country's GDP. Although these shares grew from 2008, the

<sup>17</sup> Guide on Surveying the Economic Contribution of the Copyright-Based Industries, WIPO, 2003.

time series analysis reveals that this growth happened only in two years – 2009 and 2012 – when Moldova’s GDP contracted by 6 per cent and 0.7 per cent respectively (Chart 7). Hence, core CIs were relatively resilient to both economic recessions that hit the Moldovan economy during the reference period. This resulted in a structural increase of their share in GDP and GVA. Meanwhile, the decline in the contribution of core CIs during other years suggests that the industry does not generally benefit enough from economic growth.

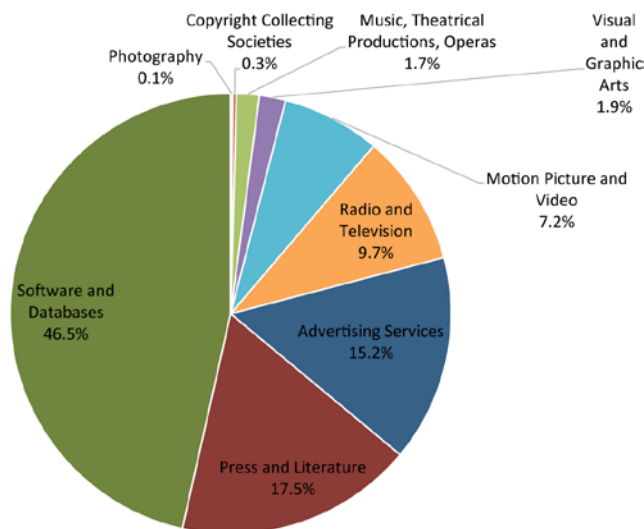
**Chart 7: Core CI contribution to GVA and GDP (%)**



Source: Calculated by the authors based on NBS data

Each CI category is composed of a series of specific copyright sectors. As shown in Chart 8, the core copyright industry is relatively concentrated, with the software and databases sector accounting for 46.5 per cent of CI GVA, followed by press and literature with 17.5 per cent, advertising services with 15.2 per cent, radio and television with 9.7 per cent and motion picture and video with 7.2 per cent. Other industries form a tiny part of the core CI.

**Chart 8: Core CI GVA by sector, 2013 (%)**

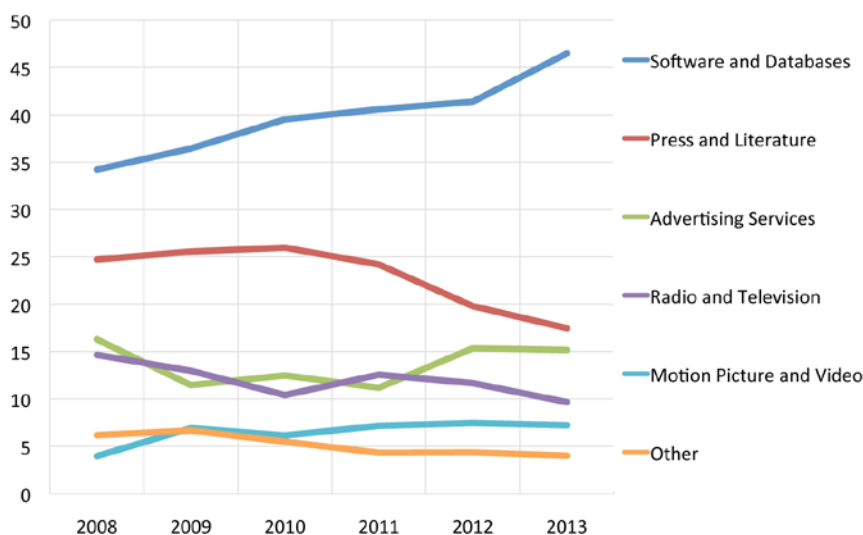


Source: Calculated by the authors based on NBS data

During the 2008-2013 period, the largest core CI sector, namely software and databases, consolidated its position, by increasing its core CI GVA from 34.2 per cent in 2008 to 46.5 per cent in 2013 (Chart 9). Compared to other core copyright industries, it posted the most significant growth, which is an indication of

the competitiveness of this industry. Other copyright industries posted a decline in their share of core CI GVA. For instance, press and literature posted the most significant decline (from 24.7 per cent in 2008 to 17.5 per cent in 2013). Overall, the robust growth of the software and databases sector and the corresponding parallel decline of the press and literature sector are driven by the on-going digitization process in Moldova.

**Chart 9: Core CI GVA by sector (%)**



Source: Calculated by the authors based on NBS data

The same patterns are evident in the contribution of core CI GVA to total GVA (Table 8). For instance, during the 2008-2013 period, the software and databases sector increased its GVA contribution from 0.87 to 1.24 per cent. Another core CI that recorded good performance was the motion picture and video sector which increased its share in GDP from 0.1 to 0.19 per cent. Meanwhile, other sectors either stagnated or suffered a decline.

**Table 8: Core CI contribution to GVA (%)**

Sector	2008	2009	2010	2011	2012	2013
Software and databases	0.87	0.95	1.01	0.99	1.14	1.24
Press and literature	0.63	0.67	0.67	0.59	0.55	0.46
Advertising services	0.41	0.30	0.32	0.27	0.42	0.40
Radio and television	0.37	0.34	0.27	0.30	0.32	0.26
Motion picture and video	0.10	0.18	0.16	0.17	0.21	0.19
Visual and graphic arts	0.07	0.06	0.06	0.05	0.05	0.05
Music, theatrical productions, operas	0.06	0.09	0.06	0.04	0.05	0.04
Copyright collecting societies	0.01	0.01	0.01	0.01	0.01	0.01
Photography	0.02	0.01	0.01	0.01	0.01	0.00
<b>Total</b>	<b>2.54</b>	<b>2.61</b>	<b>2.56</b>	<b>2.43</b>	<b>2.76</b>	<b>2.66</b>

Source: Calculated by the authors based on NBS data



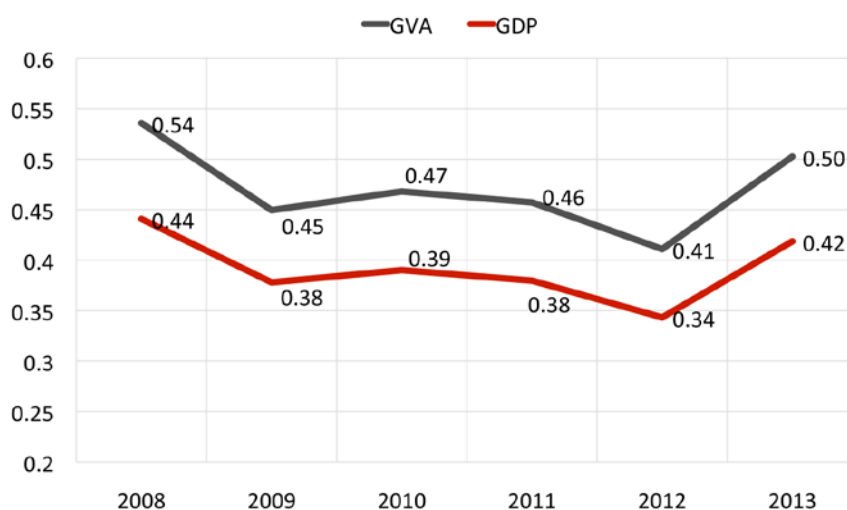
### 2.2.3 Contribution of interdependent CIs to GVA and GDP

Interdependent CIs are industries that are engaged in the production, manufacture and sale of equipment whose function is wholly or primarily to facilitate the creation, production or use of works and other protected subject matter.<sup>18</sup>

Interdependent CI GVA accounted for 12.64 per cent of the total copyright GVA and remained close to the 2008 level (13.17 per cent). In 2013, it amounted to 420.8 million lei (33.4 million US dollars), representing 0.5 per cent of national GVA and 0.42 of GDP (Chart 10).

Unlike core CIs, interdependent CIs follow a clear pro-cyclical trend. Accordingly, the largest slumps in their shares of total GVA and GDP were recorded during the crisis years (2009 and 2012). This shows that interdependent CIs are highly sensitive to prevailing economic conditions and appear to bear the brunt of economic recessions.

**Chart 10: Contribution of interdependent CIs to GVA and GDP (%)**

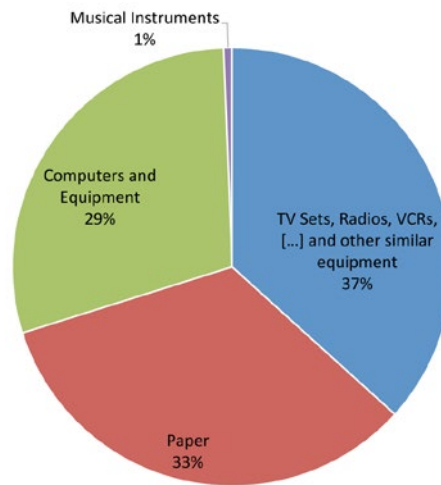


Source: Calculated by the authors based on NBS data

The GVA for interdependent CIs is distributed almost equally among three sectors: TV sets, radios, VCRs, CD players, DVD players, cassette players, electronic gaming equipment and other similar equipment (37 per cent); paper (33 per cent); and computers and equipment (29 per cent). The production of musical instruments is insignificant, accounting for only 1 per cent of the GVA for interdependent CIs (Chart 11).

<sup>18</sup> Guide on Surveying the Economic Contribution of the Copyright-Based Industries, WIPO, 2003.

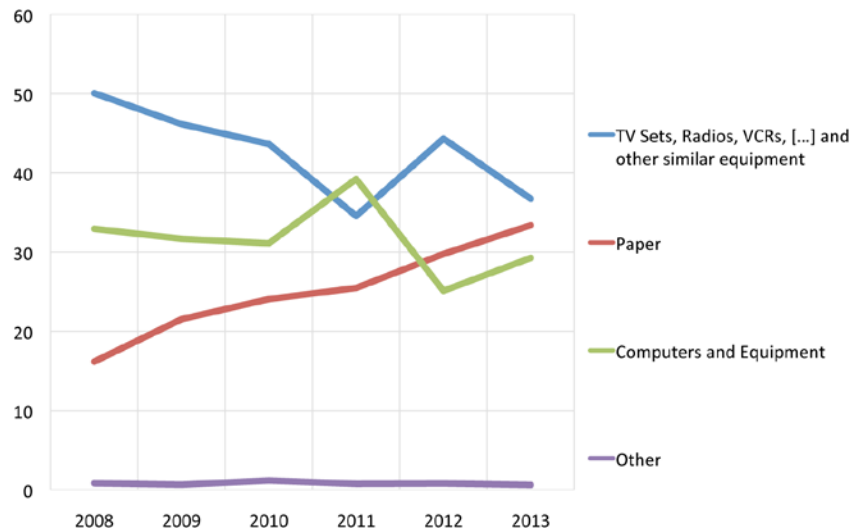
**Chart 11: Interdependent CIs by sector, 2013 (%)**



Source: Calculated by the authors based on NBS data

During the 2008-2013 period, the only sector that increased its share of GVA in interdependent CIs was paper production (from 16.17 per cent in 2008 to 33.39 per cent in 2013). This growth was paralleled by declining shares in all other sectors. For instance, although half of the interdependent CI GVA in 2008 had been generated by TV sets, radios, VCRs, [...] and other similar equipment (50.06 per cent), this share plummeted to 36.73 per cent in 2013. The contribution of computers and equipment to the GVA of interdependent CIs also declined from 32.94 per cent in 2008 to 29.26 per cent in 2013. Other economic activities remained at insignificant levels (Chart 12).

**Chart 12: Interdependent CI GVA by sector (%)**



Source: Calculated by the authors based on NBS data

As shown in Table 9, the contribution of the paper sector to the economy's GVA increased from 0.09 per cent in 2008 to 0.17 per cent in 2013. Meanwhile, the contributions of all other sectors declined. Hence, the contribution of the largest interdependent CI sector – namely, TV sets, radios, VCRs, [...], and other similar equipment – decreased from 0.27 per cent in 2008 to 0.18 per cent in 2013. The share of computers and equipment also decreased from 0.18 per cent in 2008 to 0.15 per cent in 2013.

**Table 9: Interdependent CI contribution to GVA (%)**

Interdependent CIs	2008	2009	2010	2011	2012	2013
TV sets, radios, VCRs, [...] and other similar equipment	0.27	0.21	0.20	0.16	0.18	0.18
Computers and equipment	0.18	0.14	0.15	0.18	0.10	0.15
Musical instruments	0.0036	0.0025	0.0033	0.0031	0.0030	0.0031
Photocopiers	0.0008	0.0004	0.0015	0.0003	0.0003	0.0
Photographic and cinematographic instruments	0.0001	0.0	0.0006	0.0	0.0	0.0
Paper	0.09	0.10	0.11	0.12	0.12	0.17
<b>Total</b>	<b>0.54</b>	<b>0.45</b>	<b>0.47</b>	<b>0.46</b>	<b>0.41</b>	<b>0.50</b>

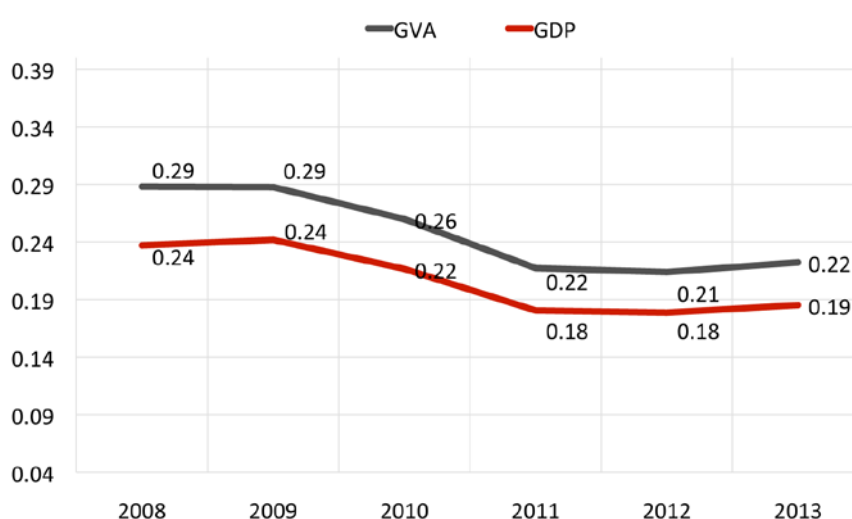
Source: Calculated by the authors based on NBS data

### 2.2.4 Contribution of partial CIs to GVA and GDP<sup>19</sup>

Partial CIs are industries in which a portion of the activities is related to works and other protected subject matter and may involve the creation, production and manufacturing, performance, broadcast, communication and exhibition or distribution and sales.<sup>20</sup>

Partial CIs are the smallest type of copyright industry, contributing only 0.22 per cent to the country's total GVA and 0.19 per cent to GDP (2013). In 2013, their contribution amounted to approximately 186.06 million lei (14.78 million US dollars), accounting for only 5.59 per cent of the total GVA for CIs.

During the 2008-2013 period, partial CI contribution to GVA and GDP clearly declined from 0.29 per cent and 0.24 per cent in 2008 to 0.22 per cent and 0.19 per cent in 2013 respectively (Chart 13). Hence, these CIs are apparently the weakest, since their contribution to the Moldovan economy is the smallest and in steady decline.

**Chart 13: Contribution of Partial CIs to GVA and GDP (%)**

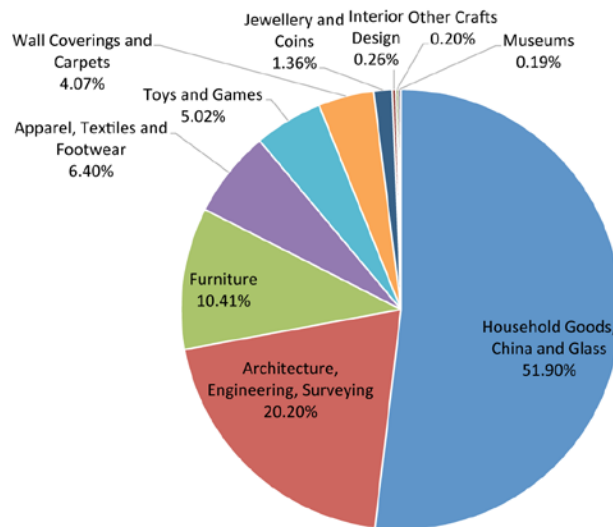
Source: Calculated by the authors based on NBS data

The largest partial CI sector is household goods, china and glass, which in 2013 accounted for 51.9 per cent of total CI GVA, followed by architecture, engineering and surveying with 20.20% and furniture with 10.41 per cent of total CI GVA. Other partial CI sectors are of very limited economic significance (Chart 14).

<sup>19</sup> All estimates are presented after the application of the copyright factors (see Annex A for methodology).

<sup>20</sup> Guide on Surveying the Economic Contribution of the Copyright-Based Industries, WIPO, 2003.

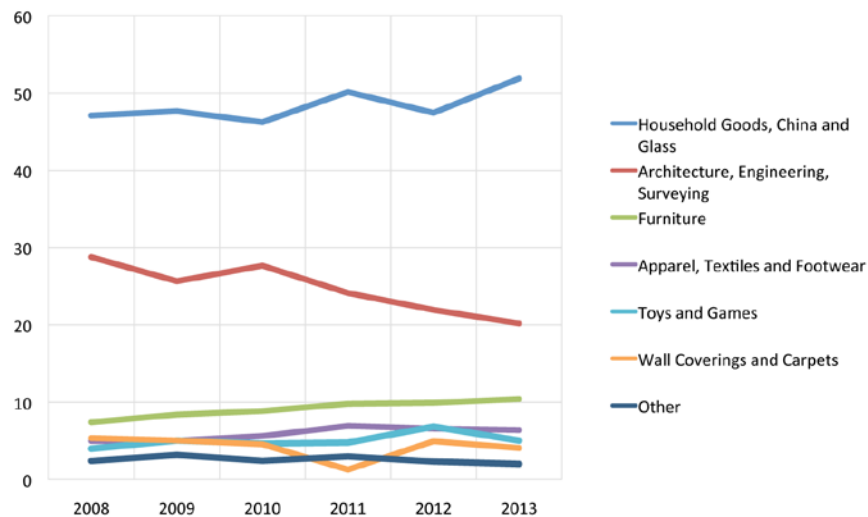
**Chart 14: Partial GVA of CIs by sector, 2013 (%)**



Source: Calculated by the authors based on NBS data

Chart 15 shows that the downward trend in partial CIs stems from the second largest sector – architecture, engineering, surveying – which decreased its contribution to the GVA of partial CIs from 28.78 per cent in 2008 to 20.20 per cent in 2013. Meanwhile, the contribution of most CI sectors to the partial GVA of CIs increased. Hence, the contribution of household goods, china and glass increased from 47.10 per cent in 2008 to 51.90 per cent in 2013, while that of furniture increased from 7.41 per cent in 2008 to 10.41 per cent in 2013.

**Chart 15: Partial CI GVA by sector (%)**



Source: Calculated by the authors based on NBS data

As shown in Table 10, the contribution of most partial CIs to total GVA declined during the 2008-2013 period. In particular, the GVA of the main sector – namely household goods, china and glass – inched down from 0.14 to 0.12 per cent, while that of architecture, engineering and surveying shrank from 0.83 per cent in 2008 to 0.045 per cent in 2013. The GVA of furniture remained at the same level, fluctuating between 0.21 and 0.23 per cent.

**Table 10: Partial CI Contribution to GVA (%)**

Partial CI	2008	2009	2010	2011	2012	2013
Apparel, textiles and footwear	0.014	0.014	0.015	0.015	0.014	0.014
Jewelry and coins	0.005	0.006	0.003	0.004	0.003	0.003
Other crafts	0.001	0.002	0.002	0.001	0.001	0.001
Furniture	0.021	0.024	0.023	0.021	0.021	0.023
Household goods, china and glass	0.136	0.137	0.120	0.109	0.101	0.115
Wall coverings and carpets	0.015	0.015	0.012	0.003	0.011	0.009
Toys and games	0.011	0.014	0.012	0.010	0.015	0.011
Architecture, engineering, surveying	0.083	0.074	0.072	0.052	0.047	0.045
Interior design	0.001	0.001	0.001	0.001	0.001	0.001
Museums	0.0004	0.0004	0.0004	0.0003	0.0004	0.0004
<b>Total</b>	<b>0.288</b>	<b>0.288</b>	<b>0.260</b>	<b>0.217</b>	<b>0.214</b>	<b>0.222</b>

Source: Calculated by the authors based on NBS data

Hence, partial CI contribution to total GVA declined during 2008-2013, driven by most of its components. The share of the top three partial CIs, (household goods, china and glass; architecture, engineering, surveying; and furniture) representing 82.51 per cent of the sector's GVA, followed a fluctuating trend. Overall, the sector remained highly concentrated and weak, making the smallest contribution to total GVA compared to other CI types.

### 2.2.5 The contribution of non-dedicated support CIs to GVA and GDP<sup>21</sup>

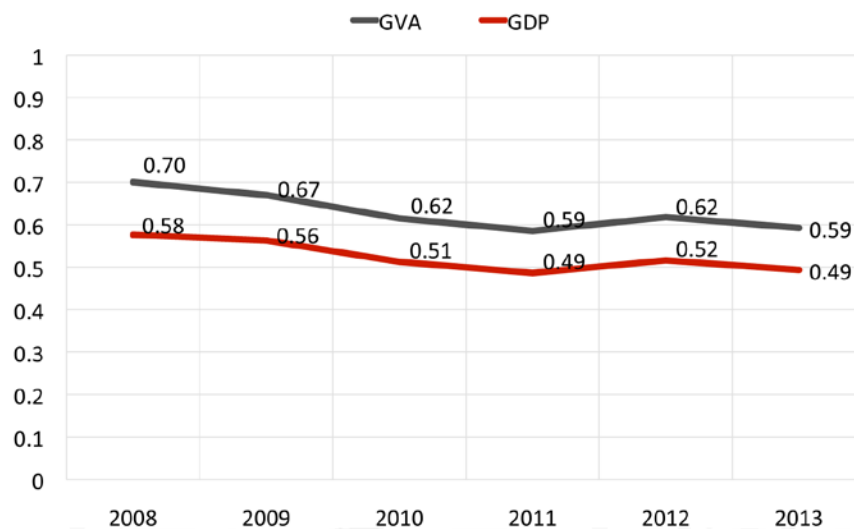
Non-dedicated support CIs are industries in which a portion of the activities is related to facilitating broadcast, communication, distribution or sales of works and other protected subject matter, and whose activities have not been included in the core copyright industries.<sup>22</sup>

The non-dedicated support CI is the second-largest type of copyright industry in Moldova. In 2013, it accounted for 14.91 per cent of the overall CI GVA in 2013, generating approximately 496.12 million lei (39.40 million US dollars) and contributing 0.59 per cent to the country's total GVA and 0.49 per cent to GDP. Its contribution to national GVA and GDP declined steadily during the 2008-2013 period (Chart 16).

<sup>21</sup> All estimates are presented after the application of the copyright factors (see Annex A for methodology).

<sup>22</sup> Guide on Surveying the Economic Contribution of the Copyright-Based Industries, WIPO.

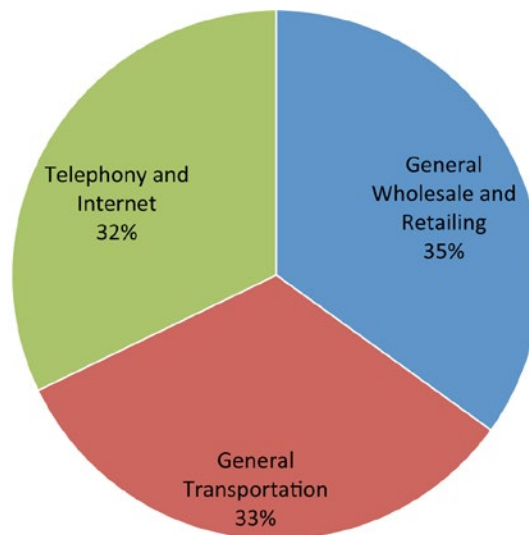
**Chart 16: Non-dedicated support CI contribution to GDP and GVA (%)**



Source: Calculated by the authors based on NBS data

As shown in Chart 17, the GVA generated by non-dedicated support CIs is distributed almost evenly across three sectors: general wholesale and retailing (35 per cent), general transportation (33 per cent) and telephony and internet (32 per cent).

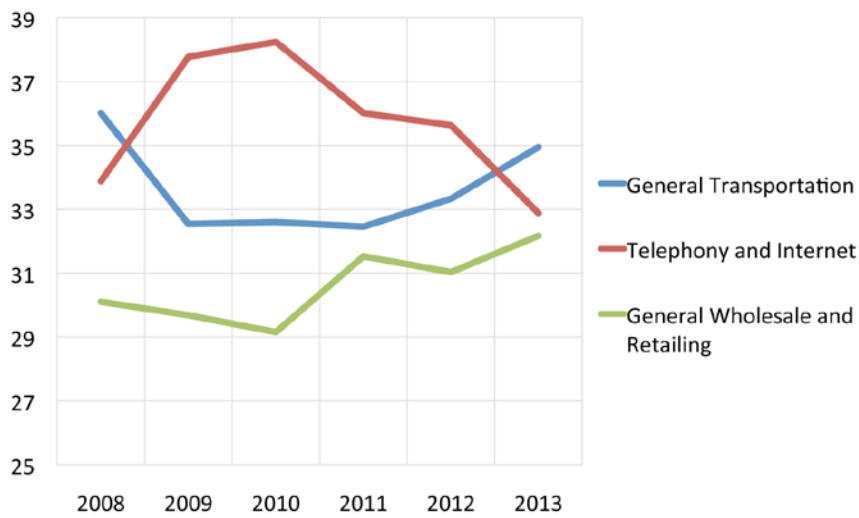
**Chart 17: GVA of non-dedicated support CIs by sector, 2013 (%)**



Source: Calculated by the authors based on NBS data

During the 2008-2013 period, the contribution of non-dedicated support CIs stemmed wholly from the copyright components of the telecommunications sector (telephony and internet), mainly due to the declining popularity of fixed telephony.

**Chart 18: Non-dedicated support CI GVA by sector (%)**



Source: Calculated by the authors based on NBS data

The contribution of telephony and internet to national GVA also declined from 0.54 per cent in 2008 to 0.44 per cent in 2013. General wholesale and retailing, as well as general transportation also recorded declines in their contribution to national GVA, albeit at a slower rate (Table 11).

**Table 11: Contribution of non-dedicated support CI to GVA (%)**

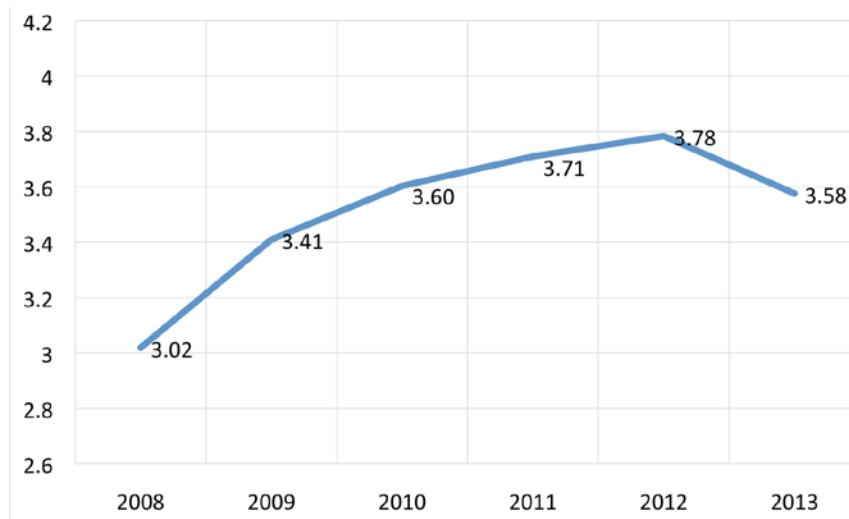
Non-dedicated support CIS	2008	2009	2010	2011	2012	2013
General wholesale and retailing	0.21	0.20	0.18	0.18	0.19	0.19
General transportation	0.25	0.22	0.20	0.19	0.21	0.21
Telephony and internet	0.24	0.25	0.24	0.21	0.22	0.19
<b>Total</b>	<b>0.70</b>	<b>0.67</b>	<b>0.62</b>	<b>0.59</b>	<b>0.62</b>	<b>0.59</b>

Source: Calculated by the authors based on NBS data

### 2.3 Contribution to employment

The copyright industries employ approximately 39,280 people (in FTE), according to 2013 estimates, which represents a moderate increase over the review period (35,720 people in 2008). In 2013, the CI workforce accounted for 3.58 per cent of the total employed labor force, representing a steady increase over the 2008-2012 period (Chart 19).

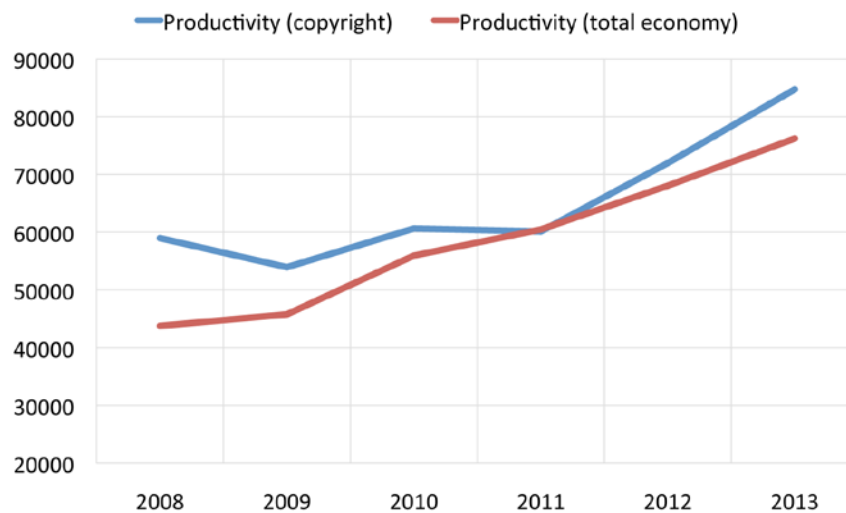
**Chart 19: CI contribution to the total labor force (%)**



Source: Calculated by the authors based on NBS data

The share of CIs in total employment is smaller than their share in GVA. This is an indication that the copyright industries record higher productivity levels than the national economy. Hence, the ratio between GVA and employment (FTE) for CIs has constantly outpaced the national average. Moreover, it has maintained a constant upward trend, and CI productivity outpaced that of the entire economy from 2012.

**Chart 20: Productivity of CIs and the national economy (in lei)**

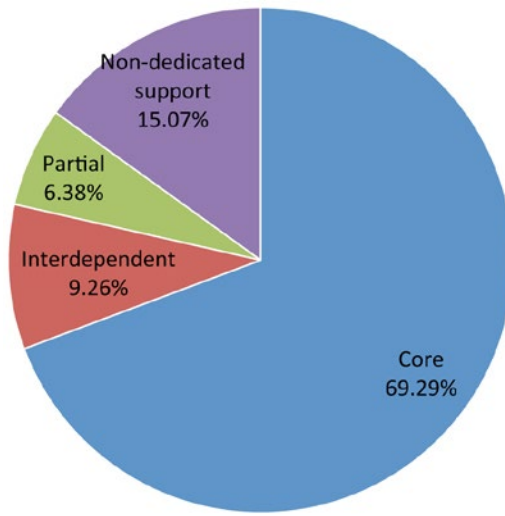


Source: Calculated by the authors based on NBS data

In terms of employment, the copyright industries depend even more on core CIs than they did with regard to GVA. Hence, core CIs employed 69.29 per cent of the total workforce in 2013, followed by the non-dedicated support CIs (15.07 per cent in 2013), interdependent CIs (9.26 per cent) and partial CIs (6.38 per cent) (Chart 21).



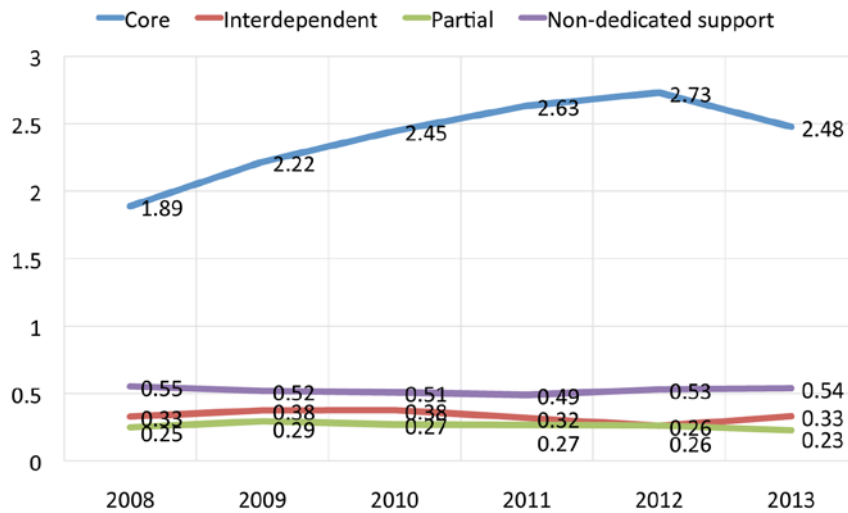
**Chart 21: Employment by CI type, 2013 (%)**



Source: Calculated by the authors based on NBS data

Considering the high concentration of the copyright industries, their contribution to total employment clearly shows that the sector is highly dependent on core CIs. Hence, CI contribution to total employment, as analyzed over the 2008-2013 period, fully reflects core CI trends: their share increased gradually from 1.89 per cent in 2008 to 2.73 per cent in 2012 and declined in 2013 to 2.48 per cent. The other CI types did not record any significant changes during the review period (Chart 22).

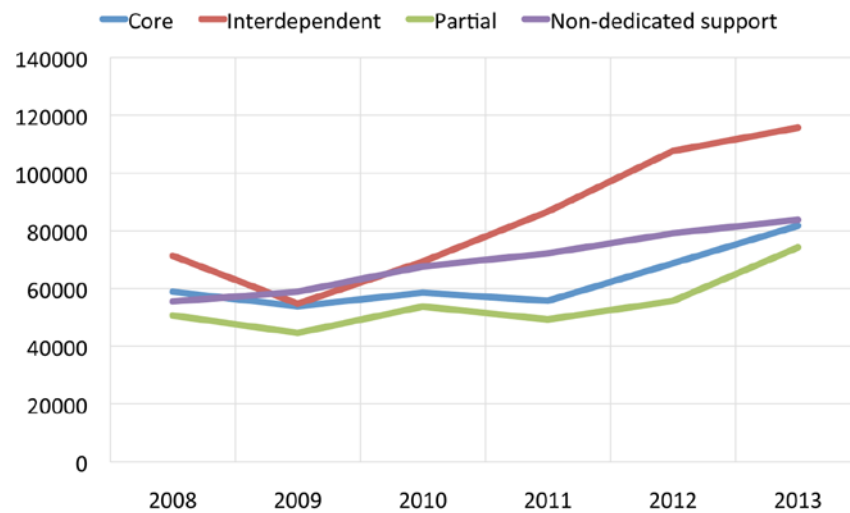
**Chart 22: Employment by CI type as a percentage of the total labor force (%)**



Source: Calculated by the authors based on NBS data

The labor productivity analysis paints a completely different picture from that of employment. For instance, core CIs, which constitute the absolute lead category among all four CI types in terms of employment, are ranked third in terms of productivity. Meanwhile, interdependent CIs, which only make a modest contribution to employment, appear to be the most productive of all four CI types and recorded the most rapid productivity growth during the 2009-2013 period. Overall, Chart 23 shows that all copyright industries experienced growth during the review period. These trends bode well for the further development of the industry and further confirm that the economic importance of the copyright industries does not lie solely in GVA or employment levels but also in constant efficiency gains for the entire economy.

**Chart 23: Labor productivity by types of CI (in lei)**

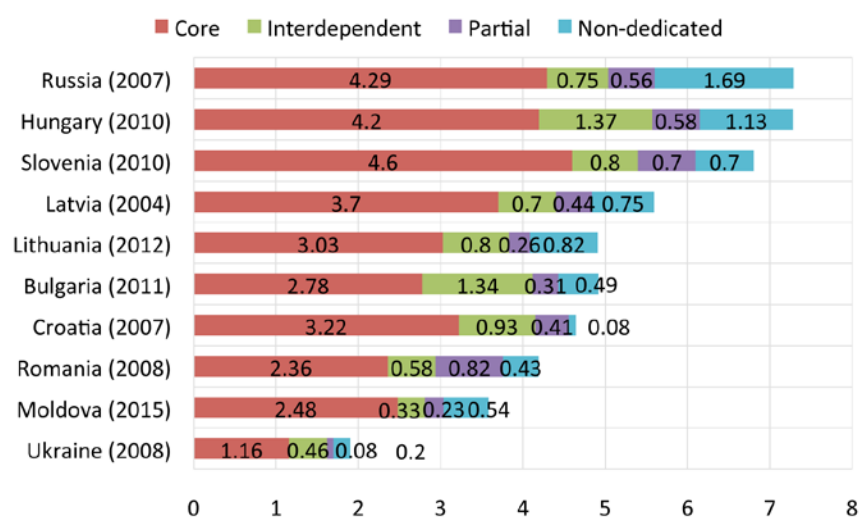


Source: Calculated by the authors based on NBS data

### 2.3.1 Regional comparison

Compared to the situation in other countries of the region, CI contribution to total employment in Moldova is relatively modest. Thus, Moldova, with a 3.58 per cent contribution to total employment, only outpaces Ukraine (1.9 per cent). It lags behind Romania (4.19 per cent), Bulgaria (4.92 per cent) and Russia (7.3 per cent). Nevertheless, the structure is similar, with core CIs being the largest employer among all four CI types (Chart 24).

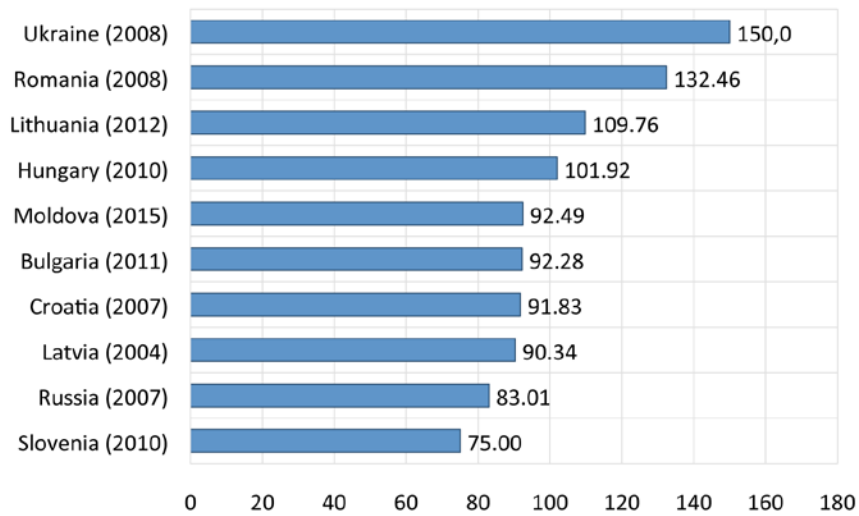
**Chart 24: Contribution to employment by CI type (%)**



Source: WIPO and authors' calculations

Although it is relatively small, the Moldovan copyright sector records efficiency gains. The productivity index (ratio between contribution to GDP and employment, multiplied by 100) of the copyright industries in Moldova is close to the regional mean (Chart 25). Thus, Moldova outpaces countries like Slovenia, Russia and Latvia in terms of productivity. Still, the industry's contribution to total GDP is lower than its contribution to employment, revealing huge potential for further improvements in labor productivity indicators. Developing this potential further could move Moldova closer in the rankings to countries like Ukraine, Romania and Lithuania in terms of productivity.

**Chart 25: CI productivity index**

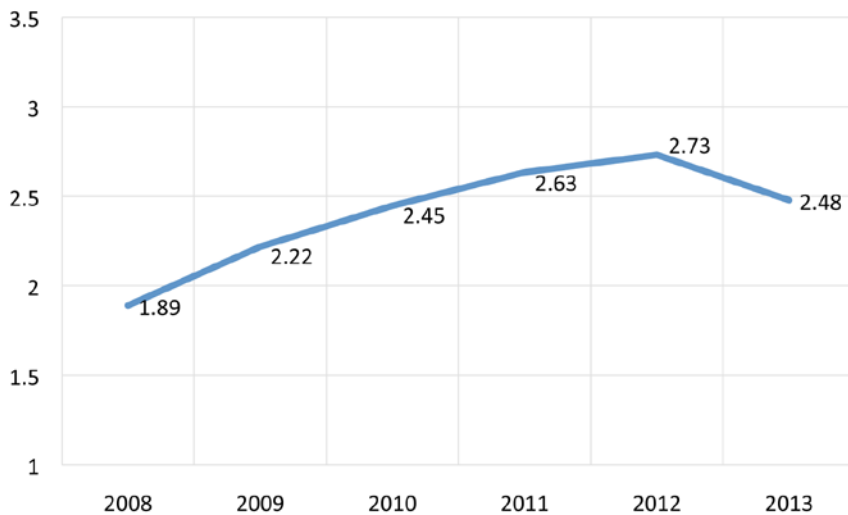


Source: WIPO and author's calculations

### 2.3.2 Contribution of the core copyright industries

Core CIs employ 27,200 people (2013) in FTE, thus accounting for 69.29 per cent of total CI employment and 2.48 per cent of overall employment. During the 2008-2012 period, their contribution to total employment increased steadily, but declined in 2013 (Chart 26).

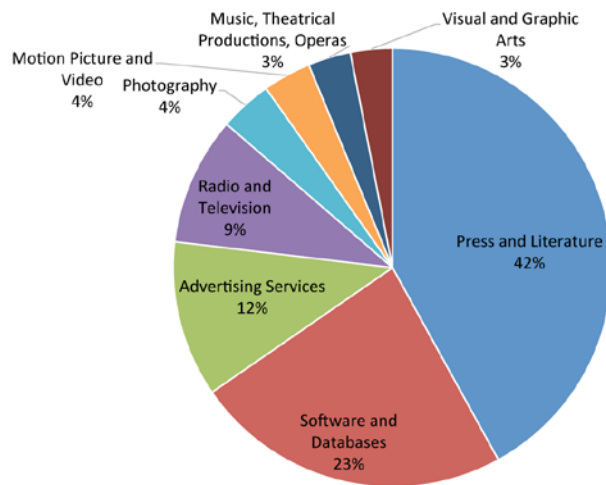
**Chart 26: Core CI contribution to the total labor force (%)**



Source: Calculated by the authors based on NBS data

The largest employer among core CIs is press and literature, which employs 42 per cent (2013) of the total CI workforce. This is hardly an indication of sector performance; it is rather a reflection of the fact that approximately half of these employees work in libraries financed with public funds. The second largest employer is software and databases (23 per cent), followed by advertising services (12 per cent) and radio and television (9 per cent). Other copyright sectors have insignificant shares (Chart 27).

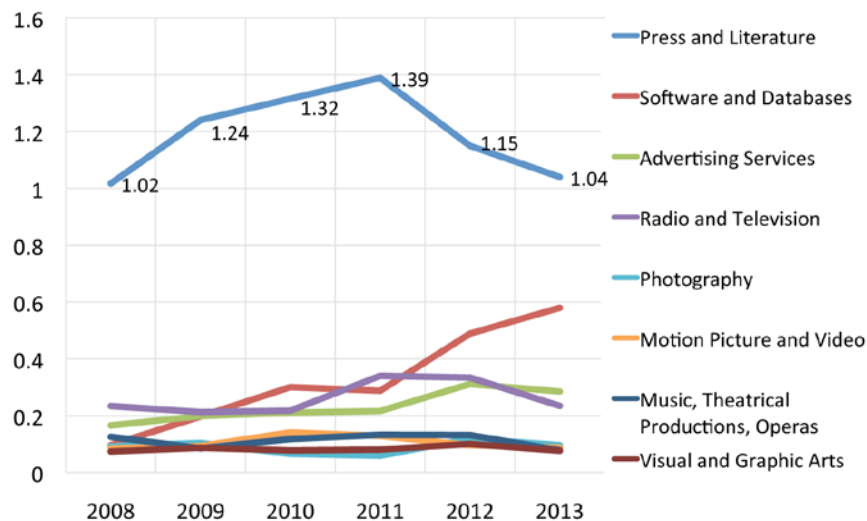
**Chart 27: Employment by core CI sector, 2013**



Source: Calculated by the authors based on NBS data

In recent years, the share of press and literature has clearly declined, not because of the main component of this sector (libraries) but because of the decline in employment in retail sale of books, newspapers and stationery. On the contrary, software and databases experienced robust growth, increasing its contribution to total employment from 0.1 per cent in 2008 to 0.6 per cent in 2013 (Chart 28).

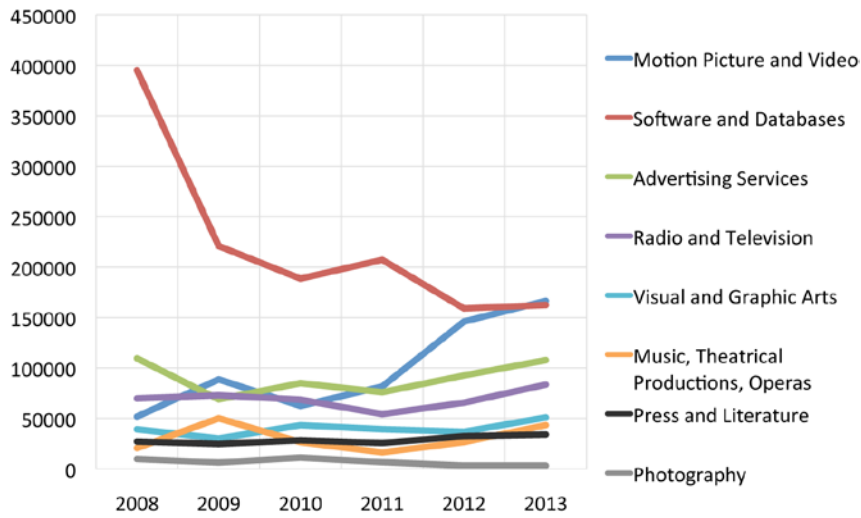
**Chart 28: Employment by core CI sector (%)**



Source: Calculated by the authors based on NBS data

Although the press and literature sector is the main employer among all core CI activities, it has one of the lowest productivity levels. Meanwhile, the software and databases sector is the second largest employer and has the second highest labor productivity levels. However, during 2008-2013, this sector suffered a decline; it used to be the leader in terms of productivity before 2013 but was outpaced by motion picture and video. Overall, apart from software and databases, photography and press and literature, all other core CI sectors have improved their productivity indicators over the last few years. Nonetheless, it should be a matter of serious concern to policymakers that the two largest core CI sectors – press and literature and software and databases – registered negative productivity trends during the review period (Chart 29).

**Chart 29: Labor productivity by core CI sector (in lei)**

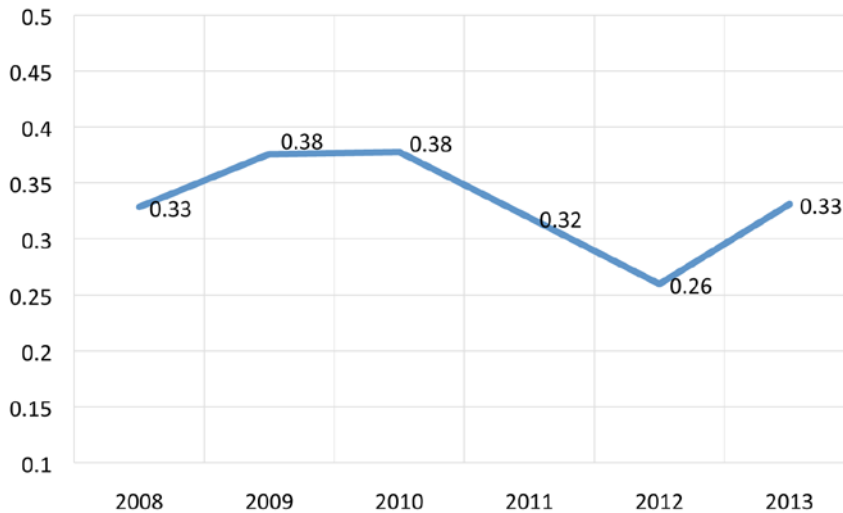


Source: Calculated by the authors based on NBS data

### 2.3.3 Contribution of the interdependent copyright industries

The interdependent CIs employ only 3,630 people (in FTE), representing 9.26 per cent of the CI workforce (2013). During the 2008-2013 period, its contribution to total employment fluctuated around the same mean of 0.3 per cent without any clear trend (Chart 30).

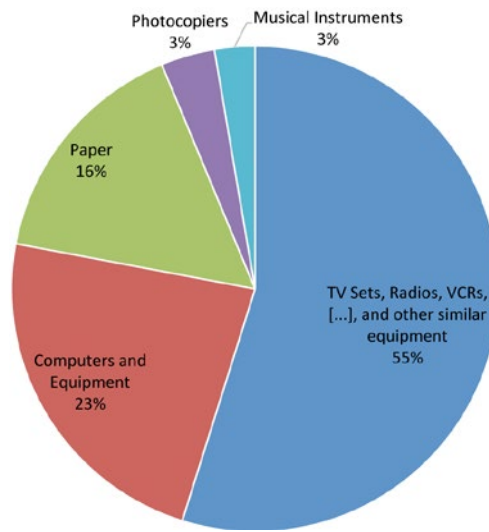
**Chart 30: Interdependent CI contribution to total employment (%)**



Source: Calculated by the authors based on NBS data

The majority (55 per cent in 2013) of employees in the interdependent copyright industries work in the wholesale and retail sale of TV sets, radios, VCRs, [...] and other similar equipment sector. Computers and equipment is the second major employer with 23 per cent of total interdependent CI employment, followed by paper with 16 per cent (Chart 31).

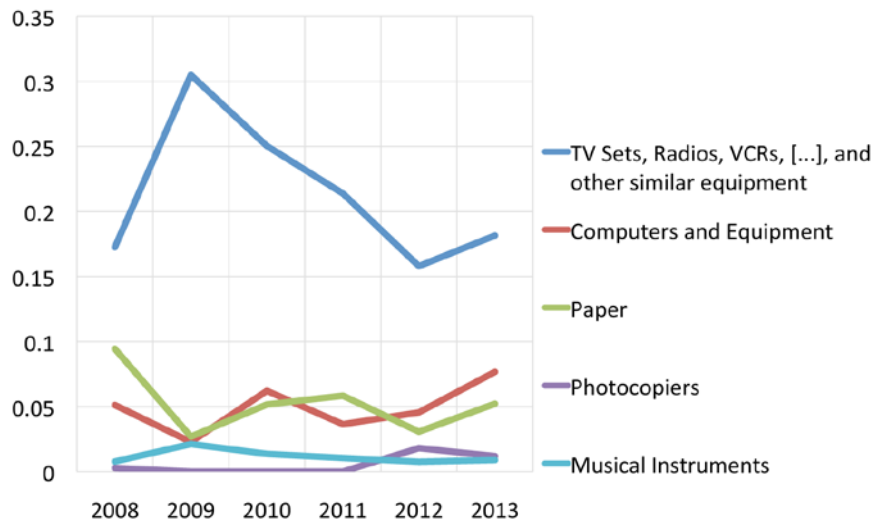
**Chart 31: Interdependent CI employment, 2013**



Source: Calculated by the authors based on NBS data

During 2008-2013, the contribution of the main interdependent copyright sector – TV sets, radios, VCRs, [...] and other similar equipment – followed a fluctuating trend, reaching 0.18 per cent of total employment in 2013. The only sector that recorded relatively pronounced growth was computers and equipment, whose contribution to total employment increased from 0.05 per cent in 2008 to 0.08 per cent in 2013. Other sectors did not show any noticeable trends (Chart 32).

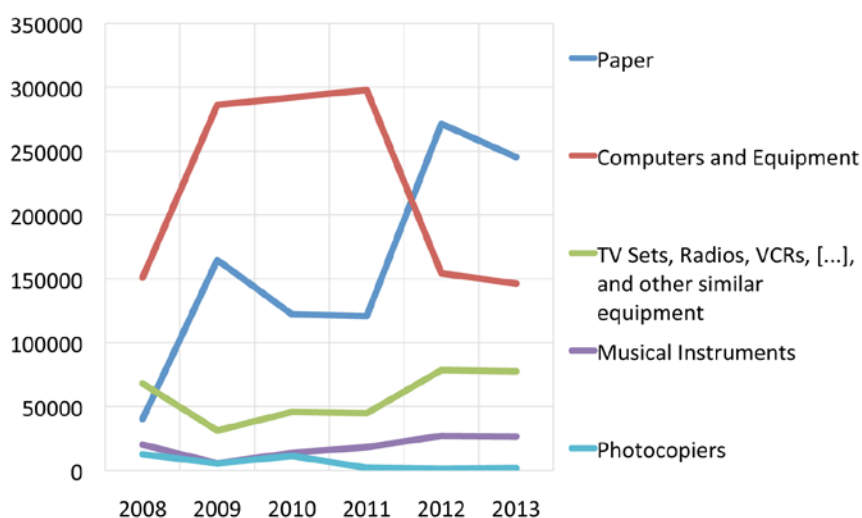
**Chart 32: Interdependent CI employment by sector (%)**



Source: Calculated by the authors based on NBS data

As was the case for core CIs, the largest sector is far from being the most productive. The TV sets, radios, VCRs, [...], and other similar equipment sector, which accounts for over half of interdependent CI employment, recorded mediocre labor productivity (third out of five interdependent copyright sectors). The largest productivity gains were recorded in paper production, which posted a clear upward trend and outpaced computers and equipment as the most productive interdependent copyright activity.

**Chart 33: Labor productivity by interdependent CI sector (in lei)**

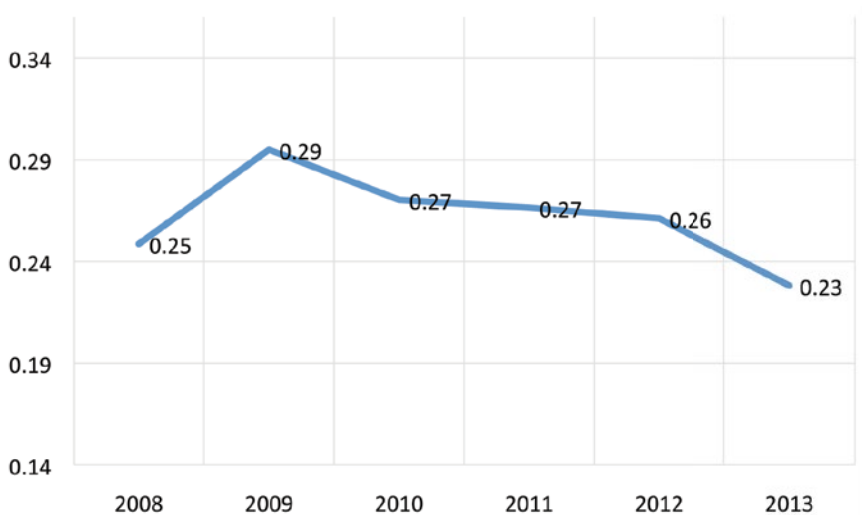


Source: Calculated by the authors based on NBS data

### 2.3.4 Contribution of the partial copyright industries<sup>23</sup>

The partial copyright sector is the smallest of all CIs in terms of employment, with 2,510 people employed (in FTE). It represents 6.38 per cent of the total copyright employment and 0.23 per cent of total employment. In addition to being a small sector, it maintained a downward trend during the review period, revealing major development constraints for this type of copyright industry (Chart 34).

**Chart 34: Partial CI contribution to total employment (%)**

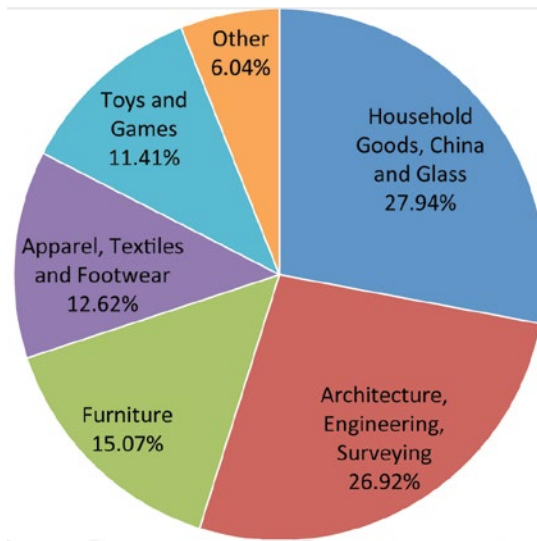


Source: Calculated by the authors based on NBS data

As shown in Chart 35, the key sectors in the partial copyright industries are: household goods, china and glass (27.94 per cent); architecture, engineering, surveying (26.92 per cent); and furniture (15.07 per cent), which all account for approximately 70 per cent of total partial CI employment.

<sup>23</sup> All estimates are after application of copyright factors (see Annex A for methodology).

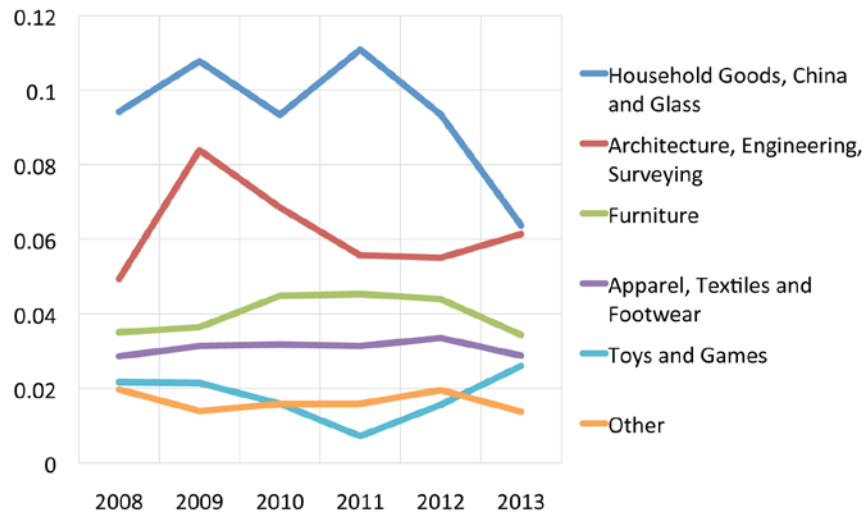
**Chart 35: Employment by partial CI sector, 2013**



Source: Calculated by the authors based on NBS data

The contribution to total employment by the largest partial CI sector – household goods, china and glass – noticeably declined in recent years. Other partial CI sectors experienced fluctuations, without clear trends either upward or downward (Chart 36).

**Chart 36: Employment by partial CI sector (%)**

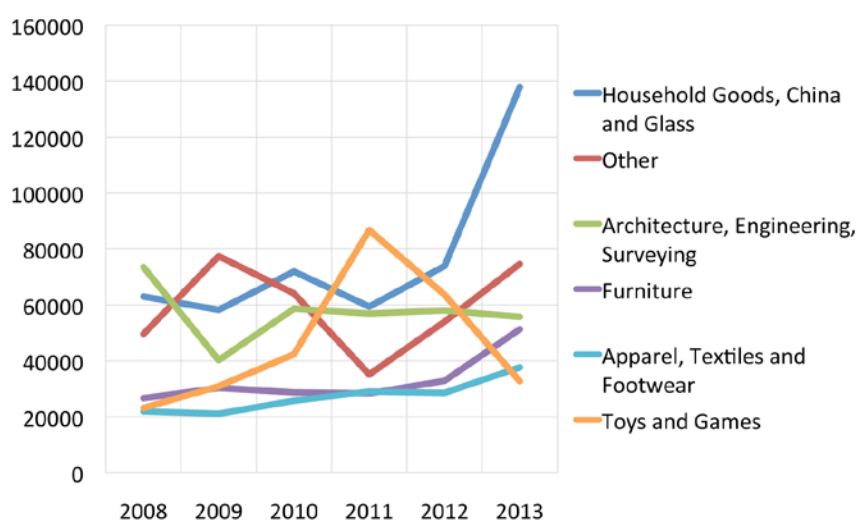


Source: Calculated by the authors based on NBS data

The largest partial CI sector in terms of employment – household goods, china and glass – also generates the greatest labor productivity. Moreover, during the review period (especially in 2013) it experienced robust growth. The second largest partial copyright employer kept its labor productivity indicators at constant levels. Toys and games registered a sharp decline in labor productivity during 2011-2013. However, this could be a temporary phenomenon, caused by rising employment indicators within the same period (Chart 36), which had not yet translated into higher GVA. All other partial CI sectors improved their productivity indicators, especially from 2011 (Chart 37).



**Chart 37: Labor productivity by partial CI sector (in lei)**

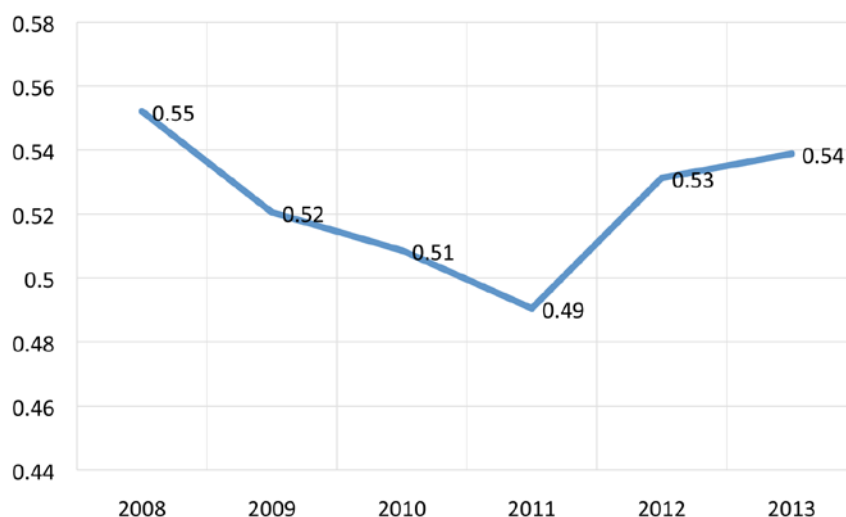


Source: Calculated by the authors based on NBS data

### 2.3.5 Contribution of the non-dedicated support copyright industries<sup>24</sup>

The non-dedicated support copyright industries form the second largest employer among all of the CIs with 5,920 thousand employees, representing 0.54 per cent of total employment in 2013. During 2008-2011, it recorded a clear downward trend from 0.55 per cent in 2008 to 0.49 per cent in 2011 but consolidated its contribution to overall employment in 2012 and 2013 (Chart 38).

**Chart 38: Non-dedicated support CI contribution to total employment (%)**

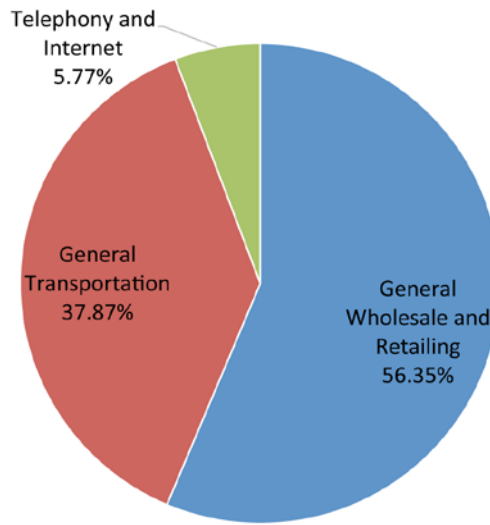


Source: Calculated by the authors based on NBS data

The majority of employees work in general wholesale and retailing (56.35 per cent) and general transportation (37.87 per cent), while telephony and internet have an insignificant share (5.77 per cent) (Chart 39).

<sup>24</sup> All estimates are presented after the application of the copyright factors (see Annex A for methodology).

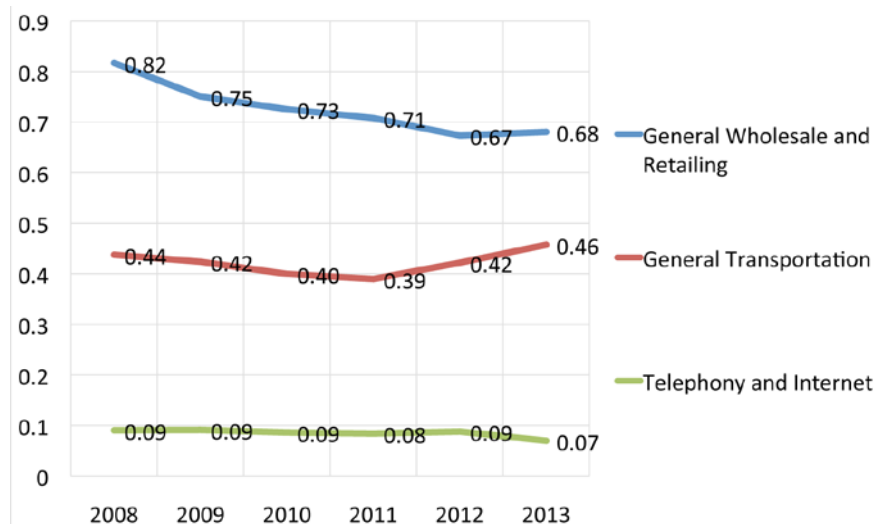
**Chart 39: Employment by non-dedicated support CI type, 2013**



Source: Calculated by the authors based on NBS data

During 2008-2013, general wholesale and retailing experienced a decline (from 0.82 per cent of total employment in 2008 to 0.68 per cent in 2013). At the same time, general transportation increased its contribution to total employment from 2011, thereby boosting the contribution of the entire non-dedicated support copyright industries. Telephony and internet experienced only mild fluctuations during the reference period (Chart 40).

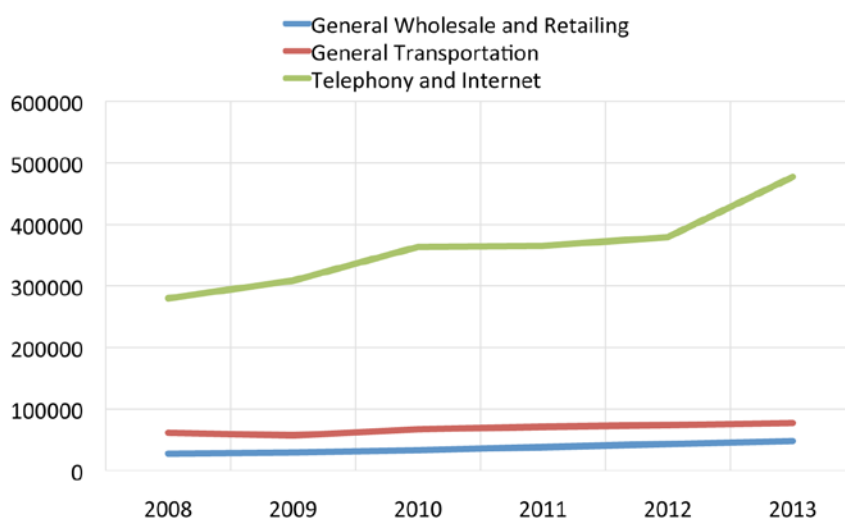
**Chart 40: Employment by non-dedicated support CI sectors (%)**



Source: Calculated by the authors based on NBS data

CIs recorded an increase in labor productivity. Still, the most significant growth was recorded by telephony and internet, mainly as a result of massive investments and transfer of know-how to this sector, primarily to improve the quality and accessibility of mobile telephony and internet (Chart 41).

**Chart 41: Labor productivity by non-dedicated support CI sector (in lei)**

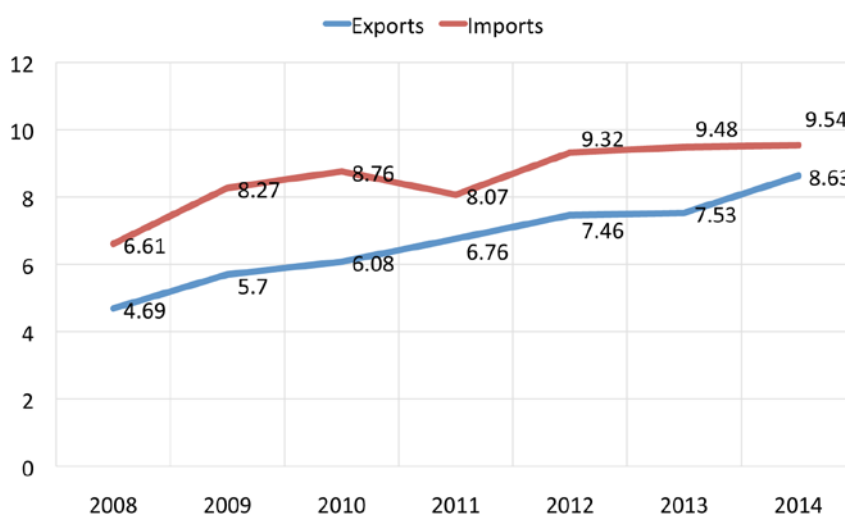


Source: Calculated by the authors based on NBS data

## 2.4 Contribution to foreign trade

During the review period (2008-2014), the copyright industries became increasingly open to foreign trade. Its contribution to total exports increased from 4.69 to 8.63 per cent, while the contribution to total imports grew from 6.61 to 9.54 per cent during the same period. In 2014, total copyright exports amounted to 1.48 billion lei (105.44 million US dollars) while total imports were 3.99 billion lei (283.64 million US dollars). Thus, imports were 2.69 times higher than exports, leading to an accumulated trade deficit of 2.51 billion lei (178.2 million US dollars).

**Chart 42: CI contribution to foreign trade (%)**



Source: Calculated by the authors based on NBS data

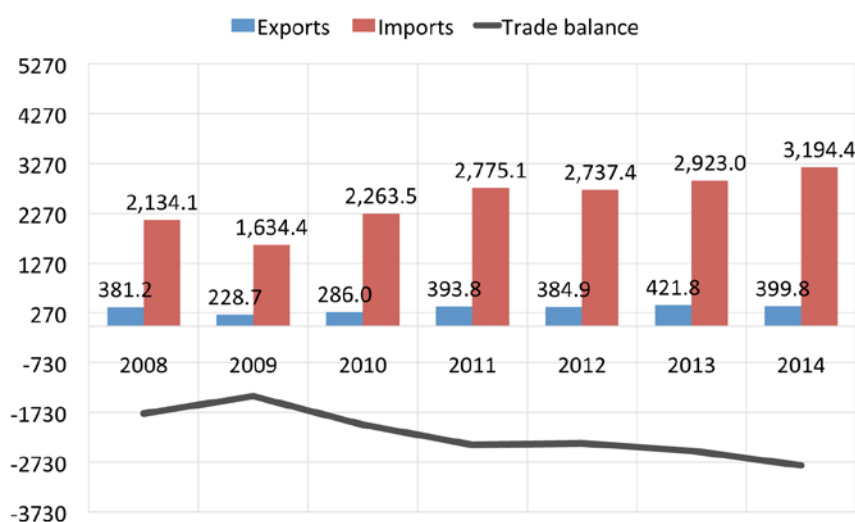
Such a large gap between imports and exports points to the pressing competitiveness issues faced by the copyright industries. Still, it is necessary to conduct separate analyses for foreign trade in copyright goods and copyright services respectively. As shown in the next sections, there are huge differences between the two: while copyright goods are less competitive (imports significantly exceed exports), copyright services tend to be competitive (trade balance is positive and trending upwards).

## 2.5 Contribution to foreign trade in goods

In 2014, total exports of copyright goods amounted to approximately 399.8 million lei (28.48 US dollars), reflecting a mediocre trend over the review period caused by pressing competitiveness issues and high sensitivity to external shocks (e.g. during the world economic crisis of 2009, exports of copyright products declined by 40 per cent). Exports of copyright goods account for a tiny share of GDP: 0.36 per cent in 2014, having declined from 0.61 per cent in 2008.

On account of the competitiveness issues affecting copyright goods, Moldova imports over 14 times more copyright products than it exports. In 2014, the volume of copyright imports amounted to approximately 3.2 billion lei (227.54 million US dollars), representing approximately 2.6 per cent of GDP. Unlike exports, the volume of imports of copyright products grew constantly over time (the only decline was recorded during the economic recession of 2009). The growing gap between exports and imports generated a negative trade balance of approximately 2.8 billion lei (199.06 million US dollars) (Chart 43).

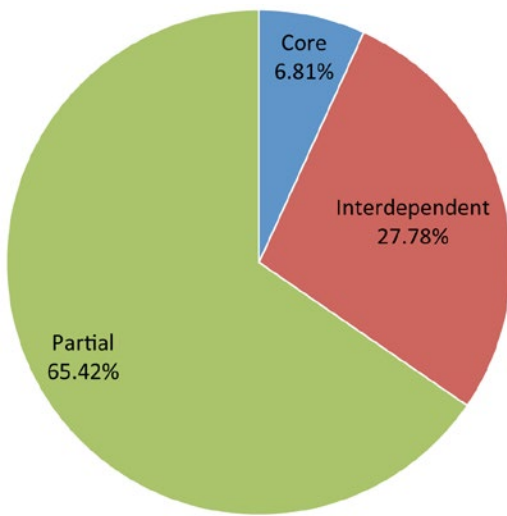
**Chart 43: Foreign trade in CI goods, (in million lei)**



Source: Calculated by the authors based on NBS data

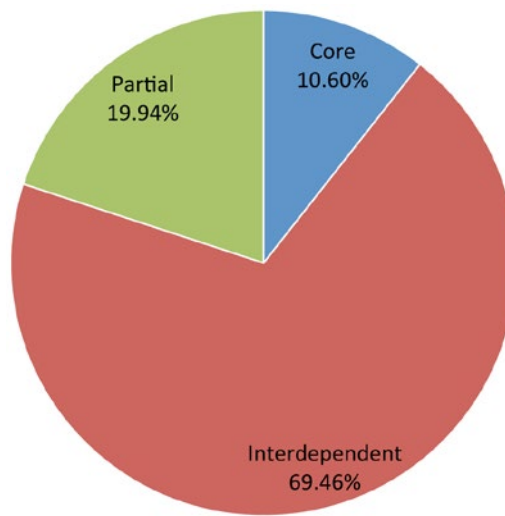
The structure of exports differs from that of imports. Partial CI products are the main copyright exports, with a share of 65.42 per cent, followed by interdependent copyright products (27.78 per cent) and core copyright products (6.81 per cent). Interdependent CIs make the largest contribution to total imports of goods (69.46 per cent in 2014), followed by partial CIs (19.94 per cent) and core CIs (10.60 per cent). No export activity was detected for non-partial support CIs (Chart 44 and Chart 45).

**Chart 44: Exports of CI goods, 2014**



Source: Calculated by the authors based on NBS data

**Chart 45: Imports of CI goods, 2014**

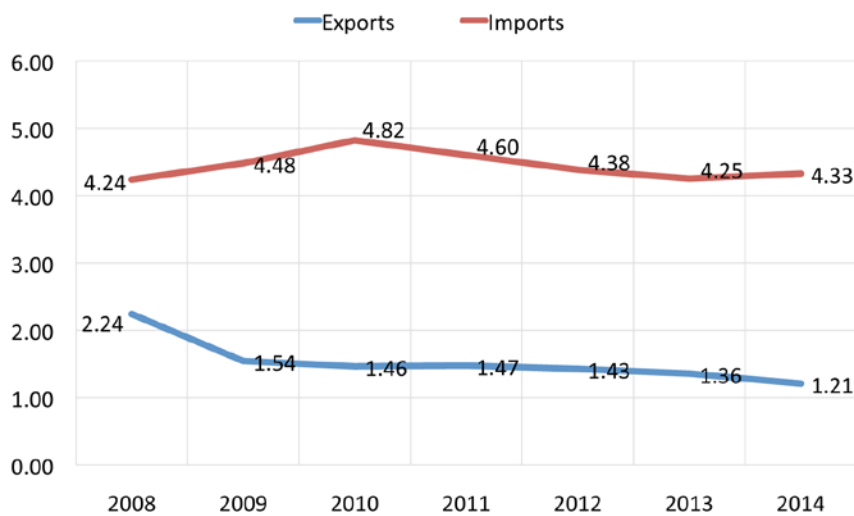


Source: Calculated by the authors based on NBS data

Interestingly, core CIs, which generate the greatest GAV and employment, among all the CI types, records only modest exporting activity. Additionally, the interdependent copyright sector, which has the highest labor productivity, also only makes a relatively modest contribution to export activity. This indicates the existence of huge untapped export potential in these industries, which should be unleashed through bolder policy measures focused on the elimination of domestic barriers to trade in copyright goods.

The copyright industries make a relatively modest contribution to total foreign trade in goods. In 2014, the copyright industries accounted for only 1.21 per cent of total goods exports but up to 4.33 per cent of total goods imports. During the review period (2008-2014), the copyright industry contribution to total goods exports declined from 2.24 to 1.21 per cent, whereas its contribution to total imports did not change significantly (Chart 46).

**Chart 46: Contribution of CI to total foreign trade in goods (%)**



Source: Calculated by the authors based on NBS data

The declining economic contribution of the copyright industries to total goods exports during the review period was caused by all of the CI types – core, interdependent and partial – which suffered a gradual decline in their respective contributions to total goods exports (Table 12). Hence, although it showed a clear downward trend, the structure of copyright industries exports did not change significantly.

**Table 12: CI exports in total exports (%)**

	Core	Interdependent	Partial
2008	0.23	0.72	1.29
2009	0.17	0.33	1.03
2010	0.11	0.33	1.02
2011	0.13	0.44	0.90
2012	0.14	0.39	0.89
2013	0.10	0.36	0.90
2014	0.08	0.34	0.79

Source: Calculated by the authors based on NBS data

The decline in the contribution of the copyright industries to total imports stemmed from core CI products, whose contribution to total imports declined from 0.56 per cent in 2008 to 0.46 per cent in 2014. At the same time, the share of interdependent CIs in total imports increased from 2.77 per cent in 2008 to 3 per cent in 2014, while the share of partial CIs remained almost unchanged (Table 13).

**Table 13: CI imports in total imports (%)**

	Core	Interdependent	Partial
2008	0.56	2.77	0.91
2009	0.82	2.69	0.98
2010	0.65	3.26	0.92
2011	0.60	3.10	0.91
2012	0.56	2.94	0.88
2013	0.46	2.89	0.90
2014	0.46	3.00	0.86

Source: Calculated by the authors based on NBS data

### 2.5.1 Core CIs contribution to foreign trade in goods

In 2014, core CI exports amounted to approximately 27.22 million lei or 1.94 million US dollars, while imports amounted to 338.64 million lei (24.1 million US dollars). The trade balance is highly negative, with imports 12 times higher than exports. This discrepancy is indicative of signs of slow recovery from 2011. However, it results from the decline in imports rather than from any competitiveness gains in the industry (Chart 47).

**Chart 47: Foreign trade in core CI products (in million US dollars)**



Source: Calculated by the authors based on NBS data

The competitiveness flaws of core CI products are highlighted by their declining contribution to total goods exports and imports (Chart 48). Thus, in 2014, core CIs contributed 0.08 per cent to total exports (down from 0.23 per cent in 2008) and 0.46 per cent to total imports (down from 0.56 per cent in 2008).

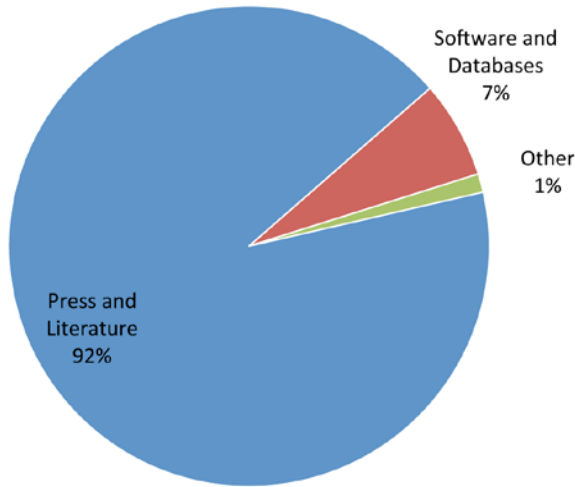
**Chart 48: Core CI contribution to total foreign trade in goods (%)**



Source: Calculated by the authors based on NBS data

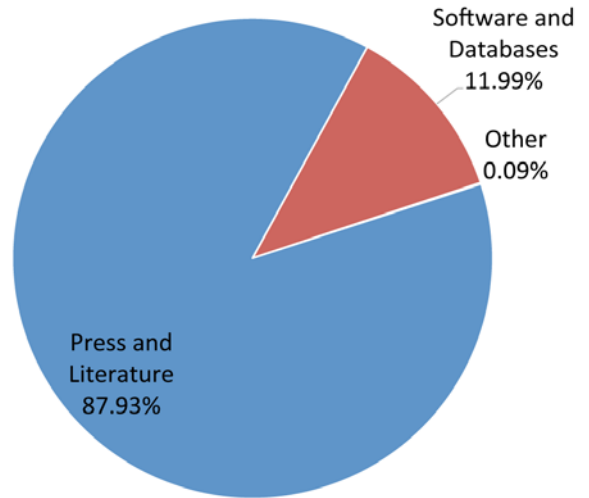
Of all the core CIs, press and literature made the greatest contribution to the foreign trade in goods. These were primarily books, journals and periodicals, which accounted for 92 per cent of total exports and 88 per cent of total imports of core copyright products (2014). The second greatest core CI contribution to foreign trade came from software and databases, which accounted for 7 per cent of exports and 12 per cent of imports of core copyright products (2014). Other core copyright economic sectors include music, theatrical productions, operas, motion picture and video, motion picture and video, visual and graphic arts, which made a negligible contribution to foreign trade in goods (Chart 49 and Chart 50).

**Chart 49: Core CI exports by sector, 2014 (%)**



Source: Calculated by the authors based on NBS data

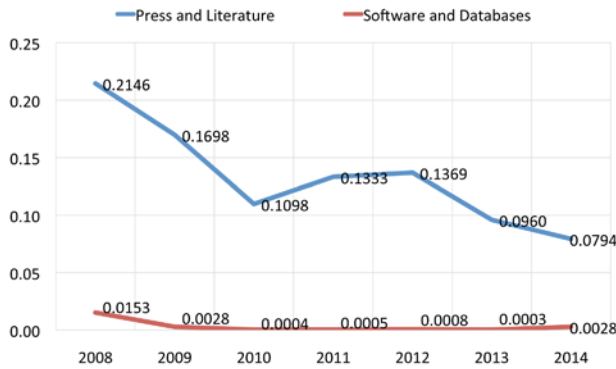
**Chart 50: Core CI imports by sector, 2014 (%)**



Source: Calculated by the authors based on NBS data

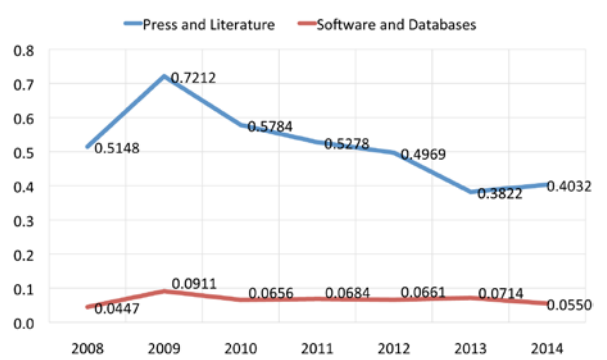
Charts 51 and 52 show that the declining core CI contribution to foreign trade in goods during 2008-2014 was caused by press and literature, whose contribution to total goods exports declined from 0.21 per cent in 2008 to 0.08 per cent in 2014. At the same time, the contribution of software and databases remained modest and did not change much.

**Chart 51: Main core CI exports in total goods exports (%)**



Source: Calculated by the authors based on NBS data

**Chart 52: Main core CI imports in total goods imports (%)**



Source: Calculated by the authors based on NBS data

### 2.5.2 Interdependent CI contribution to foreign trade in goods

Interdependent CI exports in 2014 amounted to 111.05 million lei (7.91 million US dollars), while imports amounted to 2.22 billion lei (158.04 million US dollars). Thus, as with core copyright products, the trade balance is highly negative, with imports being 20 times greater than exports. Moreover, this gap widened during the review period (Chart 53).



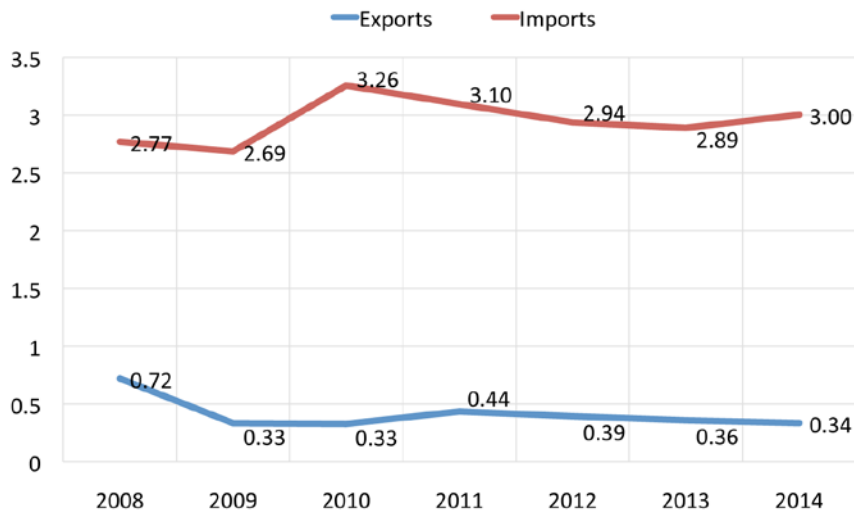
**Chart 53: Foreign trade in interdependent CI products (in million lei)**



Source: Calculated by the authors based on NBS data

Like the core CIs, interdependent CIs seem to have serious competitiveness flaws. Their contribution to total goods exports during 2009-2014 hovered around 0.3 per cent, on account of the industry's inability to recover from the economic crisis of 2009 (Chart 54).

**Chart 54: Interdependent CIs contribution to foreign trade (%)**

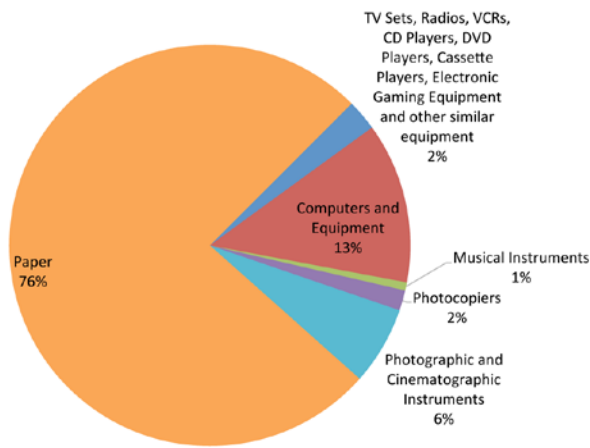


Source: Calculated by the authors based on NBS data

The structure of interdependent CI exports is slightly more diversified than that of core CI exports. In 2014, approximately 76 per cent of interdependent CI exports were essentially paper (Manufacture of Paper and Paperboard). Computers and equipment also made a significant contribution to the industry's exports (13 per cent in 2014) while the other sectors' contributions were negligible (Chart 55).

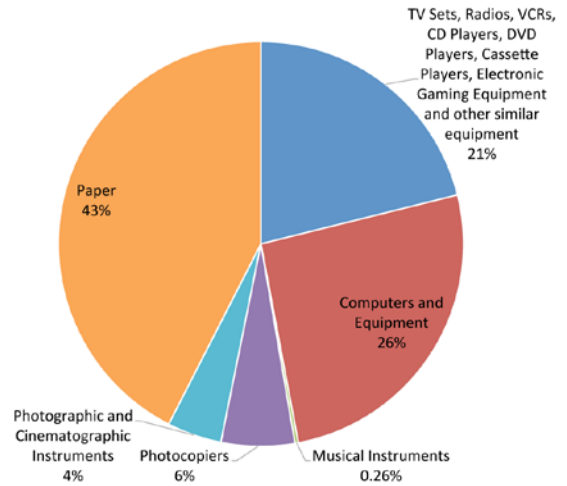
The Interdependent CI goods imports appear to be more diversified than exports (Chart 56). Imports of paper account for approximately 43 per cent of total interdependent CI imports, followed by imports of computers and equipment (26 per cent), and TV sets, radios and other similar equipment (21 per cent).

**Chart 55: Interdependent CI exports by sector, 2014 (%)**



Source: Calculated by the authors based on NBS data

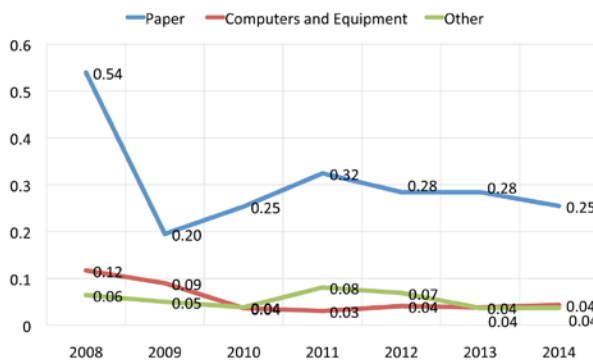
**Chart 56: Interdependent CI imports by sector, 2014 (%)**



Source: Calculated by the authors based on NBS data

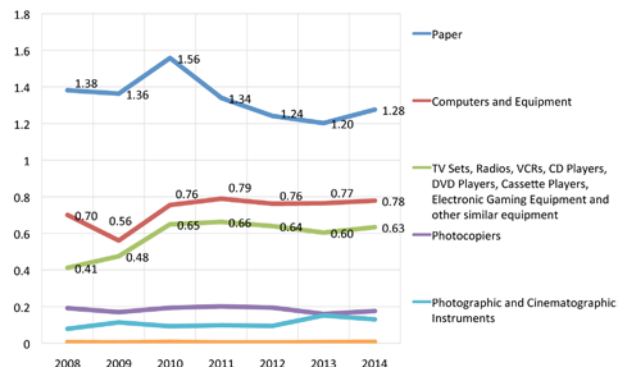
The share of the main interdependent CI goods (i.e. Paper) in total goods exports plummeted during the economic crisis of 2009 and did not recover again in subsequent years. Moreover, this industry's contribution to total goods exports began a steady decline from 2011. The share of computers and equipment in total goods exports also declined during 2008-2014 from 0.12 to 0.04 per cent. The contribution of Interdependent CI to total goods imports is slightly higher and exhibits better trends. Although the share of paper imports during 2008-2014 was quite volatile, the share of the second and third most important interdependent CI imports increased (Chart 57 and Chart 58).

**Chart 57: Interdependent CI contribution to total goods exports (%)**



Source: Calculated by the authors based on NBS data

**Chart 58: Interdependent CI contribution to total goods imports (%)**



Source: Calculated by the authors based on NBS data

### 2.5.3 Partial<sup>25</sup> CI contribution to foreign trade in goods

The exports of Partial CI exports in 2014 amounted to approximately 261.53 million lei (18.63 million US dollars), while imports amounted to 637.04 million lei (45.38 million US dollars). Compared to core and interdependent CIs, partial CIs appear to be more competitive. They account for approximately two thirds of total CI exports (2014), and the gap between partial CI exports and imports is much smaller: imports are 2.4 times greater than exports (Chart 59).

<sup>25</sup> All estimates are presented after the application of the copyright factors (see Annex A for methodology).

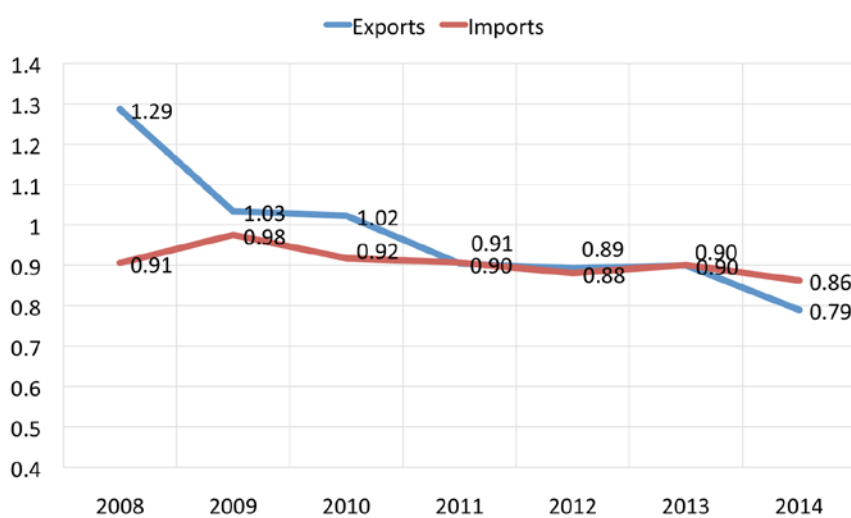
**Chart 59: Foreign trade in partial CI products, million USD**



Source: Calculated by the authors based on NBS data

Moreover, in terms of contribution to total foreign trade in goods, the gap is even smaller. However, during 2008-2012, the share of partial CI goods exports in total exports actually exceeded the CI share in total imports. Nevertheless, the steady decline in exports is disturbing and reflects losses in competitiveness during the review period (Chart 60).

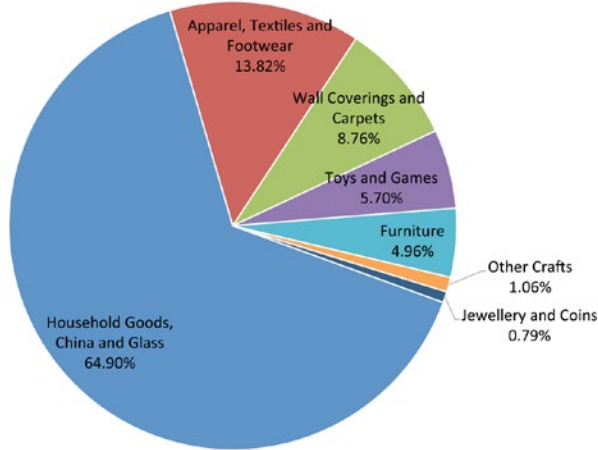
**Chart 60: Partial CI contribution to foreign trade (%)**



Source: Calculated by the authors based on NBS data

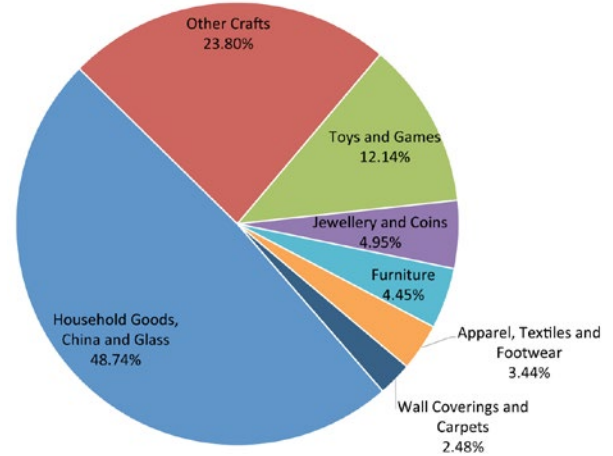
Partial CI exports are dominated by household goods, china and glass sector (64.90 per cent), followed by apparel, textiles and footwear (13.82 per cent) and wall coverings and carpets (8.76 per cent). The shares of other partial copyright sectors in total exports are insignificant (Chart 61). Household goods, china and glass dominate partial CI imports as well, with a share of 48.74 per cent, followed by other crafts (23.80 per cent) and toys and games (12.14 per cent) (Chart 62).

**Chart 61: Partial CI exports by sector, 2014 (%)**



Source: Calculated by the authors based on NBS data

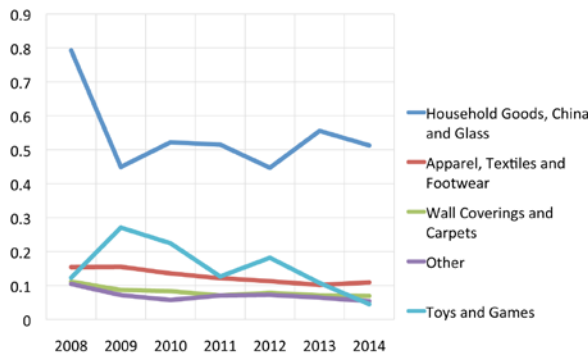
**Chart 62: Partial CI imports by sector, 2014 (%)**



Source: Calculated by the authors based on NBS data

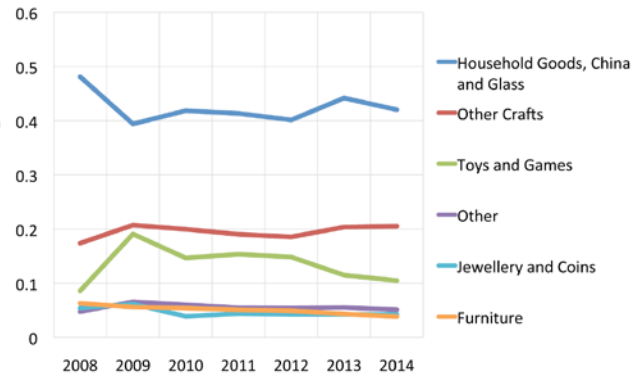
Chart 63 shows that the decline in partial CI contribution to total exports during 2008-2014 stems from toys and games, whose share clearly declined from 0.12 per cent in 2008 to 0.05 per cent in 2014. The contribution of other partial CI sectors to total exports also declined, albeit at a slower pace. Meanwhile, the structure of imports did not change much (Chart 64).

**Chart 63: The most important partial CI exports in total exports (%)**



Source: Calculated by the authors based on NBS data

**Chart 64: The most important partial CI imports in total imports (%)**



Source: Calculated by the authors based on NBS data

## 2.6 Contribution to foreign trade in services

The balance of the trade in copyright services is positive and followed an upward trend during the review period, in contrast to the negative foreign trade balance of copyright goods (Chart 65). During 2008-2014, exports surged to 3.6 times their initial volume, amounting to 1.08 billion lei (76.96 million US dollars), while the share in GDP doubled (from 0.5 per cent in 2008 to 1.0 per cent in 2014). During the same period, imports also increased to 2.3 times their initial volume, albeit at a slower pace, amounting to 787.27 million lei (56.1 million US dollars) in 2014, while their share in GDP rose slightly (from 0.4 per cent in 2008 to 0.7 per cent in 2014).

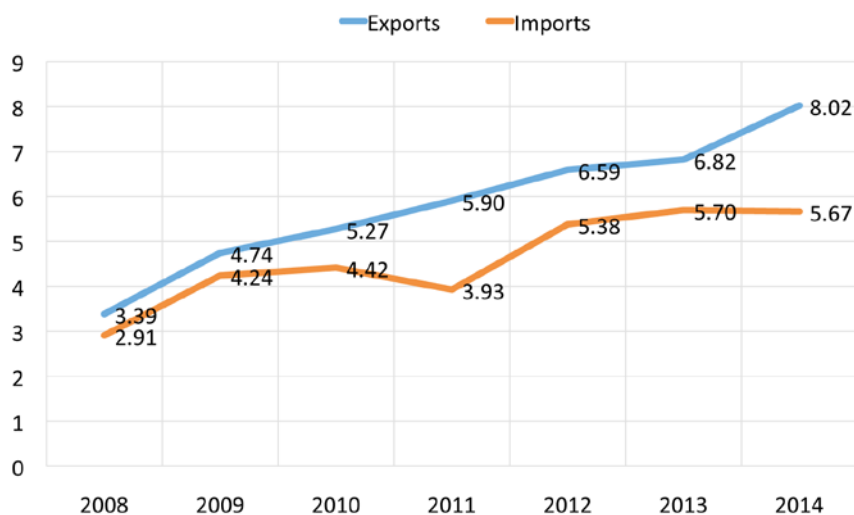
**Chart 65: Foreign trade in CI services (in million lei)**



Source: Calculated by the authors based on NBS data

CI importance for services is also confirmed by the upward trend in their contribution to total foreign trade in services. Thus, during 2008-2014, the share of CI exports in total services exports spiraled from 3.39 to 8.02 per cent, while the share of CI imports almost doubled from 2.91 per cent to 5.67 per cent. Furthermore, the CI contribution to exports grew faster than its contribution to imports, which bodes well for this sector's sustainable development (Chart 66).

**Chart 66: CI Contribution of CI to total foreign trade in services (%)**



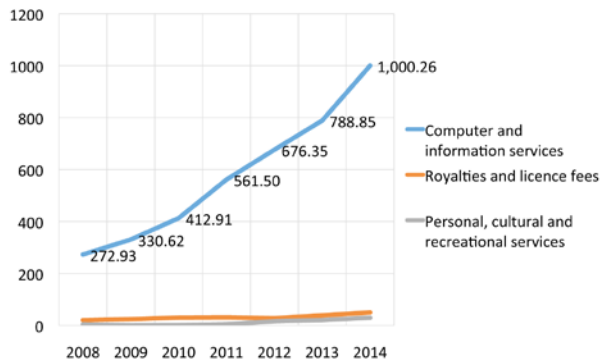
Source: Calculated by the authors based on NBS data

The growing competitiveness of copyright services, depicted during 2008-2014, wholly stemmed from computer and information services whose exports increased 2.7 times and accounted for approximately 92.64 per cent (2014) of total CI services exports. Meanwhile, royalties and license fees, as well as personal, cultural and recreational services only make a tiny contribution to total exports of copyright services.

Computer and information services also dominated imports of copyright services, with a share of 75.69 per cent, which rose 3.59 times above its initial level during 2008-2014. At the same time, the import share of royalties and license fees increased from 77.51 million lei in 2008 to 154.71 million lei in 2014, while the imports of personal, cultural and recreational services increased from 9.35 million lei to 36.78 million lei.

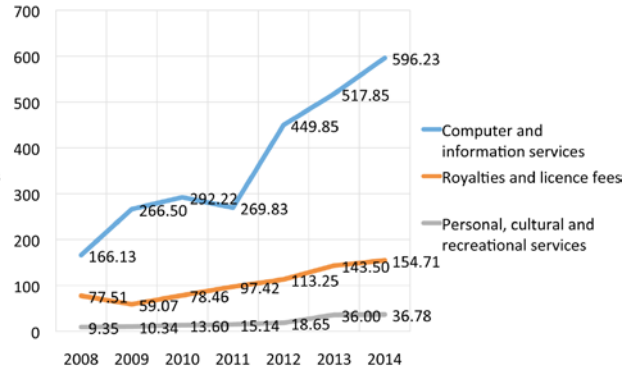
Overall, the development of foreign trade in copyright services was spurred by trends in computer and information services (Chart 67 and Chart 68).

**Chart 67: Exports of CI services, million lei**



Source: Calculated by the authors based on NBS data

**Chart 68: Imports of CI services, million lei**



Source: Calculated by the authors based on NBS data

All copyright services increased their contribution to total exports of services. The computer and information services sector significantly increased its contribution to total services exports from 3.11 per cent in 2008 to 7.43 per cent in 2014, the largest component being computer services, with a contribution of 6.16 per cent to total exports of services (2014). The contributions of royalties and license fees also increased but at a slower pace (from 0.23 per cent in 2008 to 0.37 per cent in 2014), primarily boosted by other payments for copyrights and licenses. The economic contribution of personal, cultural and recreational services to exports inched up from only 0.04 per cent in 2008 to 0.22 per cent in 2014, owing primarily to audio-visual and related services (Table 14).

**Table 14: CI services exports in total services exports (%)**

	2008	2009	2010	2011	2012	2013	2014
<b>Computer and information services</b>	<b>3.11</b>	<b>4.42</b>	<b>4.91</b>	<b>5.56</b>	<b>6.19</b>	<b>6.34</b>	<b>7.43</b>
Computer services	2.44	3.47	3.85	4.36	4.86	4.98	6.13
Information services	0.67	0.95	1.06	1.20	1.33	1.37	1.30
News agencies services	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other information services	0.67	0.95	1.06	1.20	1.33	1.37	1.30
<b>Royalties and license fees</b>	<b>0.23</b>	<b>0.32</b>	<b>0.36</b>	<b>0.31</b>	<b>0.25</b>	<b>0.31</b>	<b>0.37</b>
Franchises and similar services	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other payments for copyrights and licenses	0.23	0.32	0.36	0.31	0.25	0.31	0.37
<b>Personal, cultural and recreational services</b>	<b>0.04</b>	<b>0.02</b>	<b>0.01</b>	<b>0.04</b>	<b>0.15</b>	<b>0.17</b>	<b>0.22</b>
Audio-visual and related services	0.04	0.02	0.01	0.04	0.15	0.17	0.22
Other personal, cultural and recreational services	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>3.39</b>	<b>4.74</b>	<b>5.27</b>	<b>5.90</b>	<b>6.59</b>	<b>6.82</b>	<b>8.02</b>

Source: Calculated by the authors based on NBS data

As with exports, all types of copyright services increased their contribution to total imports of services. The contribution of computer and information services to total imports of services increased from 1.91 per cent in 2008 to 2.77 per cent in 2014, mainly due to the expansion of imports of computer services. The share of royalties and license fees underwent a modest increase (from 0.89 per cent in 2008 to 1.0 per cent in 2014), as did the share of personal, cultural and recreational services (from 0.11 per cent in 2008 to 0.16 per cent in 2014). Interestingly, some types of copyright services (news agencies services; franchises and similar services; other personal, cultural and recreational services) did not record any export and import activities during 2008-2014.

**Table 15: Imports of CI services in total imports (%)**

	2008	2009	2010	2011	2012	2013	2014
<b>Computer and information services</b>	<b>1.91</b>	<b>3.11</b>	<b>3.36</b>	<b>4.42</b>	<b>3.36</b>	<b>4.91</b>	<b>2.77</b>
Computer services	1.67	2.44	2.93	3.47	2.93	3.85	2.42
Information services	0.24	0.67	0.43	0.95	0.43	1.06	0.35
News agencies services	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other information services	0.24	0.67	0.43	0.95	0.43	1.06	0.35
<b>Royalties and license fees</b>	<b>0.89</b>	<b>0.23</b>	<b>0.75</b>	<b>0.32</b>	<b>0.90</b>	<b>0.36</b>	<b>1.00</b>
Franchises and similar services	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other payments for copyrights and licenses	0.89	0.23	0.75	0.32	0.90	0.36	1.00
<b>Personal, cultural and recreational services</b>	<b>0.11</b>	<b>0.04</b>	<b>0.13</b>	<b>0.14</b>	<b>0.16</b>	<b>0.01</b>	<b>0.16</b>
Audio-visual and related services	0.11	0.04	0.13	0.14	0.16	0.01	0.16
Other personal, cultural and recreational services	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>2.91</b>	<b>3.39</b>	<b>4.24</b>	<b>4.74</b>	<b>4.42</b>	<b>5.27</b>	<b>3.93</b>

Source: Calculated by the authors based on NBS data

## 2.7 Copyright industries' contribution to GVA, GDP, employment and foreign trade

As a general conclusion, the contribution of the copyright industries to the economy of the Republic of Moldova is significant. In 2013, it represented 3.98 per cent of total GVA and 3.31 per cent of GDP. It experienced a gradual decline during the 2008-2013 review period, thus highlighting the structural problems which undermine the development of this industry. It also accounted for 3.31 per cent of total employment, which is lower compared to the share in GVA, thus revealing some productivity gains of the industry relative to the rest of the economy (Table 16).

**Table 16: Contribution of the CI to GVA, employment and foreign trade (%)**

	2008	2009	2010	2011	2012	2013	2014
<b>Gross value added</b>	<b>4.07</b>	<b>4.02</b>	<b>3.91</b>	<b>3.69</b>	<b>4.00</b>	<b>3.98</b>	<b>N/A</b>
<b>Gross domestic product</b>	<b>3.35</b>	<b>3.38</b>	<b>3.26</b>	<b>3.06</b>	<b>3.34</b>	<b>3.31</b>	<b>N/A</b>
<b>Employment</b>	<b>3.02</b>	<b>3.41</b>	<b>3.60</b>	<b>3.71</b>	<b>3.78</b>	<b>3.58</b>	<b>N/A</b>
<b>Exports</b>	<b>4.69</b>	<b>5.70</b>	<b>6.08</b>	<b>6.76</b>	<b>7.46</b>	<b>7.53</b>	<b>8.63</b>
Goods exports	2.24	1.54	1.46	1.47	1.43	1.36	1.21
Services exports	3.39	4.74	5.27	5.90	6.59	6.82	8.02
<b>Imports</b>	<b>6.61</b>	<b>8.27</b>	<b>8.76</b>	<b>8.07</b>	<b>9.32</b>	<b>9.48</b>	<b>9.54</b>
Goods imports	4.24	4.48	4.82	4.60	4.38	4.25	4.33
Services imports	2.91	4.24	4.42	3.93	5.38	5.70	5.67

Source: Calculated by the authors based on NBS data

**Table 17: Size of the CI GVA, employment and foreign trade compared to the national economy**

	2008	2009	2010	2011	2012	2013	2014
<b>Gross value added (CI)</b> , in billion lei	2,106.19	2,041.38	2,340.19	2,522.45	2,949.07	3,327.95	N/A
<b>Gross Value Added (total economy)</b> , in billion lei	51,773.55	50,809.19	59,920.69	68,389.56	73,686.10	83,719.48	N/A
<b>Employment (CI)</b> , thousands (FTE)	35.72	37.86	38.60	41.96	40.98	39.28	N/A
<b>Employment (total economy)</b> , thousands (FTE)	1,183.48	1,110.50	1,071.33	1,131.14	1,083.0	1,098.45	N/A
<b>Exports (CI)</b> , in million lei	678.05	583.57	729.82	990.42	1,105	1,269.89	1,479.59
Exports of goods (CI), in million lei	381.22	228.71	285.99	393.77	384.93	421.81	399.80
Exports of services (CI), in million lei	296.83	354.86	443.83	596.65	720.07	848.08	1,079.79
<b>Imports (CI)</b> , in million lei	2,387.05	1,970.26	2,647.82	31573,57.47	3,319.17	3,620.35	3,982.12
Imports of goods (CI), in million lei	2134.07	1,634.36	2,263.54	2,775.08	2,737.42	2,923.01	3,194.40
Imports of services (CI), in million lei	252.98	335.90	384.28	382.39	581.75	697.34	787.72
<b>Exports (total economy)</b> , in million lei	25,867.78	22,227.24	28,081.64	36,838.81	37,917.85	43,487.27	46,481.77
Exports of goods (total economy), in million lei	17,100.08	14,746.70	19,667.73	26,734.19	26,992.52	31,050.68	33,019.96
Exports of services (total economy), in million lei	8,767.70	7,480.54	8,413.91	10,104.62	10,925.33	12,436.59	13,461.81
<b>Imports (total economy)</b> , in million lei	59,313.24	44,326.69	55,817.89	70,148.17	73,225.52	80,842.5	87,804.55
Imports of goods (total economy), in million lei	50,616.50	36,404.39	47,114.12	60,411.98	62,410.90	68,602.07	73,899.68
Imports of services (total economy), in million lei	8,696.74	7,922.30	8,703.77	9,736.19	10,814.62	12,240.43	13,904.87

Source: Calculated by the authors based on NBS data

On the positive side, the copyright industries have become increasingly open in recent years: the share of copyright exports in total exports increased from 4.69 per cent in 2008 to 8.63 per cent in 2014, while the share of imports expanded from 6.61 per cent in 2008 to 9.54 per cent in 2014. Thus, the gap between total CI exports and imports narrowed. This positive trend originates from foreign trade in services, which has recorded a positive and steadily improving trade balance. Meanwhile, copyright goods recorded a negative trade balance because their contribution to total foreign trade in goods is modest and on a downward trend. Hence, Moldova seems to have competitive advantages in copyright services, whereas copyright goods industries are less competitive.



### 3. The Most Important Copyright Industries

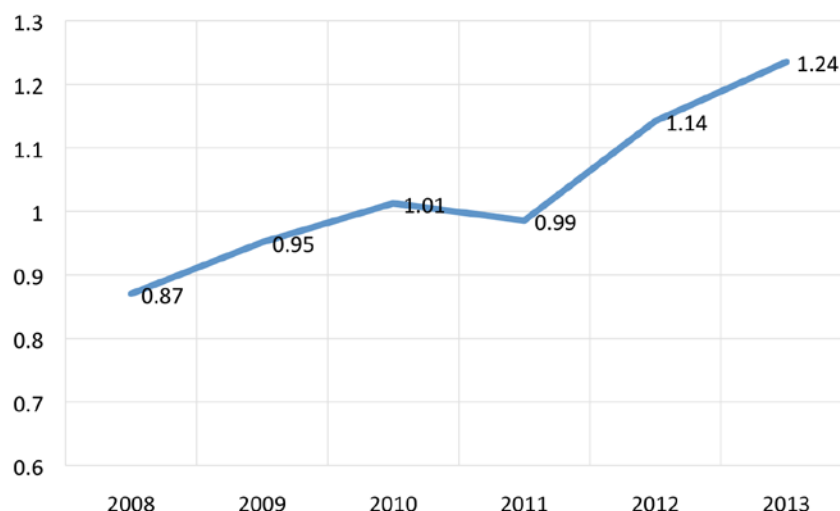
This section analyses the economic contribution of and trends in the three most important copyright industries: (i) software and databases; (ii) press and literature; and (iii) advertising services. These sectors make the strongest contribution of all types of copyright activities to the creation of gross value added, gross domestic product and employment. Moreover, software and databases and press and literature are also the most important copyright exports (no statistical evidence of exports of advertising services has been found).

#### 3.1 Software and databases

##### 3.1.1 Contribution to gross value added

The most important copyright industry in Moldova is software and databases. In 2013, it accounted for about 1.03 billion lei or 82.14 million US dollars, which was double the 2008 level. Its contribution to GVA rose, increasing from 0.87 per cent in 2008 to 1.24 per cent in 2013 (Chart 69). These were by far the largest shares contributed by any copyright industry.

**Chart 69: Contribution to GVA of the software and databases industry (%)**



Source: Calculated by the authors based on NBS data.

The most important, in terms of GVA created, were database activities, which in 2013 accounted for about 435.39 million lei or 34.6 million US dollars, followed by other software consultancy and supply activities, with about 359.73 million lei or 28.6 million US dollars. Together, these activities represented about 77 per cent of the software and databases industry. Data processing is a smaller but very promising activity, with GVA increasing 5.6 times in the period 2008-2013 and amounting to about 10.52 per cent of the entire software and databases industry. Software publishing was the least significant type of activity and followed an upward but volatile trend, especially during 2011-2013 (Table 18).

**Table 18: GVA in software and databases, thousand lei**

Code	Description	2008	2009	2010	2011	2012	2013
72.21	Software publishing	14,425	21,253	40,025	62,474	35,679	52,599
72.22	Other software consultancy and supply	102,095	110,382	142,402	180,783	218,613	359,733
72.30	Data processing	19,259	25,985	29,569	25,199	105,295	108,791
72.40	Database activities	297,019	296,760	375,034	362,465	440,537	435,385
72.60	Other computer-related activities	17,784	22,515	19,719	43,113	41,452	77,669
<b>Software and databases</b>		<b>450,581</b>	<b>483,395</b>	<b>606,749</b>	<b>674,034</b>	<b>841,578</b>	<b>1,034,176</b>

Source: Calculated by the authors based on NBS data

**Table 19: GVA in software and databases, thousand US dollars**

Code	Description	2008	2009	2010	2011	2012	2013
72.21	Software publishing	1,388.4	2,497.2	3,236.6	5,322.8	2,945.7	4,177.6
72.22	Other software consultancy and supply	9,826.8	9,932.3	11,515.3	15,402.8	18,049.0	28,571.3
72.30	Data processing	1,853.7	2,338.2	2,391.1	2,147.0	8,693.3	8,640.6
72.40	Database activities	28,588.4	26,702.9	30,327.1	30,882.3	36,371.4	34,579.9
72.60	Other computer-related activities	1,711.7	2,025.9	1,594.6	3,673.3	3,422.4	6,168.8
<b>Software and databases</b>		<b>43,368.9</b>	<b>43,496.6</b>	<b>49,064.7</b>	<b>57,428.2</b>	<b>69,481.8</b>	<b>82,138.1</b>

Source: Calculated by the authors based on NBS data

Although database activities is the largest activity in the software and databases industry (0.52 per cent of total GVA in 2013), its share was volatile during 2008-2013, with the lowest level reached in 2013. At the same time, the contribution to GVA of other software consultancy and supply doubled during 2008-2013, from 0.20 per cent to 0.43 per cent. Other types of activities, despite having much lower shares in total GVA, visibly increased their contribution during 2008-2013 (Table 15).

**Table 20: GVA in software and databases, % GVA**

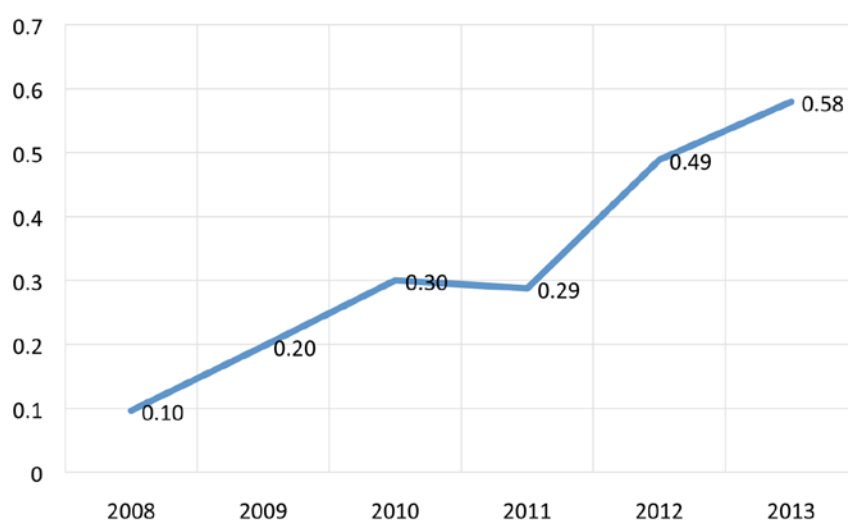
Code	Description	2008	2009	2010	2011	2012	2013
72.21	Software publishing	0.03	0.05	0.07	0.09	0.05	0.06
72.22	Other software consultancy and supply	0.20	0.22	0.24	0.26	0.30	0.43
72.30	Data processing	0.04	0.05	0.05	0.04	0.14	0.13
72.40	Database activities	0.57	0.58	0.63	0.53	0.60	0.52
72.60	Other computer related activities	0.03	0.04	0.03	0.06	0.06	0.09
<b>Software and databases</b>		<b>0.87</b>	<b>0.95</b>	<b>1.01</b>	<b>0.99</b>	<b>1.14</b>	<b>1.24</b>

Source: Calculated by the authors based on NBS data

### 3.1.2 Contribution to employment

The software and databases industry employs about 6,400 people (in FTE), and is the second largest employer of all the copyright industries (the top employer is press and literature). In 2013, it represented 0.58 per cent of total employment, its share following a clear upward trend and increasing six times compared to 2008 (Chart 70).

**Chart 70: Employment in software and databases, % of total employment**



Source: Calculated by the authors based on NBS data

As in the structure of GVA, the activities that employ the most people in the software and databases industry are other software consultancy and supply (3,600 people in 2013) and database activities (1,470 people in 2013). Both activities showed strong growth over the review period (2008-2013). Software publishing and data processing also visibly increased their number of employees during 2008-2013, whereas other computer related activities followed a very volatile pattern (Table 21).

**Table 21: Employment in software and databases, thousand people**

Code	Description	2008	2009	2010	2011	2012	2013
72.21	Software publishing	0.24	0.18	0.59	0.33	1.11	0.60
72.22	Other software consultancy and supply	0.08	0.93	1.50	1.39	2.46	3.60
72.30	Data processing	0.23	0.23	0.23	0.28	0.22	0.44
72.40	Database activities	0.37	0.34	0.64	1.19	1.41	1.47
72.60	Other computer-related activities	0.22	0.52	0.26	0.05	0.10	0.26
<b>Software and databases</b>		<b>1.14</b>	<b>2.19</b>	<b>3.22</b>	<b>3.25</b>	<b>5.29</b>	<b>6.37</b>

Source: Calculated by the authors based on NBS data

Besides accounting for the largest share in total software and databases employment (57 per cent in 2013), other software consultancy and supply activities registered the most significant change during 2008-2013, increasing its share in total employment from only 0.01 per cent to 0.33 per cent. Database activities also expanded visibly from only 0.03 per cent in 2008 to 0.13 per cent in 2013. Other types of activities made insignificant contributions to total employment and followed a volatile pattern (Table 22).

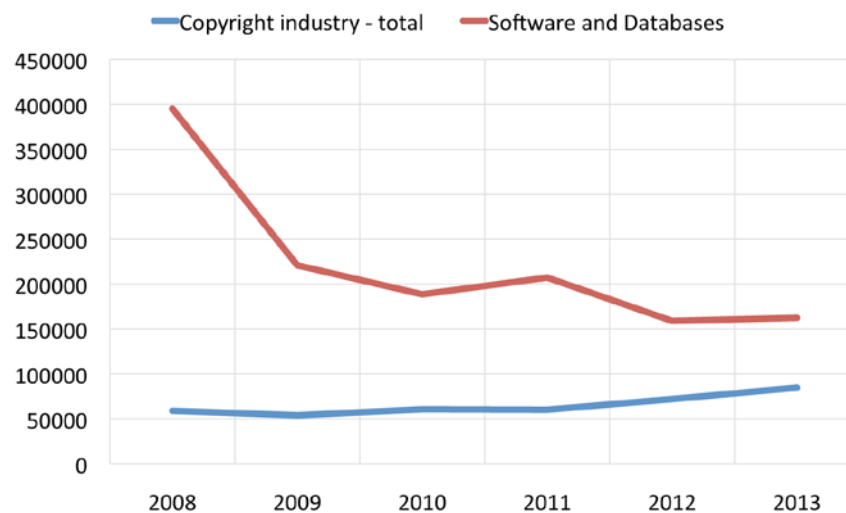
**Table 22: Employment in software and databases, % of total employment**

Code	Description	2008	2009	2010	2011	2012	2013
72.21	Software publishing	0.02	0.02	0.06	0.03	0.10	0.05
72.22	Other software consultancy and supply	0.01	0.08	0.14	0.12	0.23	0.33
72.30	Data processing	0.02	0.02	0.02	0.02	0.02	0.04
72.40	Database activities	0.03	0.03	0.06	0.11	0.13	0.13
72.60	Other computer related activities	0.02	0.05	0.02	0.00	0.01	0.02
<b>Software and databases</b>		<b>0.10</b>	<b>0.20</b>	<b>0.30</b>	<b>0.29</b>	<b>0.49</b>	<b>0.58</b>

Source: Calculated by the authors based on NBS data

As highlighted by Chart 71, software and databases is one of the most productive industries in Moldova. Its productivity indicator was markedly better than that of the entire CI during the review period (2008-2013). For example, in 2008, it was about eight times higher than productivity for the entire CI. Over the following years, productivity remained above the industry average but its relative strength declined due to rocketing employment in other software consultancy and supply (from 100 in 2008 to 3,600 in 2013) and database activities (from 400 in 2008 to 1,500 in 2013).

**Chart 71: Productivity in software and databases and the entire CI, lei**



Source: Calculated by the authors based on NBS data

As revealed by Table 18, the highest rates of productivity were recorded by database activities (23,500 US dollars of GVA per employee in 2013), other computer-related activities (23,900 US dollars of GVA per employee in 2013) and data processing (19,500 US dollars of GVA per employee in 2013). The most prominent productivity losses were reported by other software consultancy and supply, plummeting from 124,000 US dollars of GVA per employee in 2008 to only 7,900 US dollars of GVA per employee in 2013.

**Table 23: Productivity in software and databases, lei**

Code	Description	2008	2009	2010	2011	2012	2013
72.21	Software publishing	61,213.90	157,370.87	67,521.62	188,645.49	32,153.23	88,244.76
72.22	Other software consultancy and supply	1,288,319.02	119,213.71	95,008.98	129,765.48	88,840.39	99,951.40
72.30	Data processing	84,206.29	114,558.95	128,938.11	89,132.83	482,878.04	245,647.49
72.40	Database activities	793,008.08	882,409.08	587,639.16	304,184.97	313,340.23	295,775.10
72.60	Other computer related activities	80,166.37	43,041.89	76,230.73	798,447.22	419,669.38	301,372.43
<b>Software and databases</b>		<b>395,251.98</b>	<b>220,880.19</b>	<b>188,559.75</b>	<b>207,227.65</b>	<b>158,992.98</b>	<b>162,408.74</b>

Source: Calculated by the authors based on NBS data

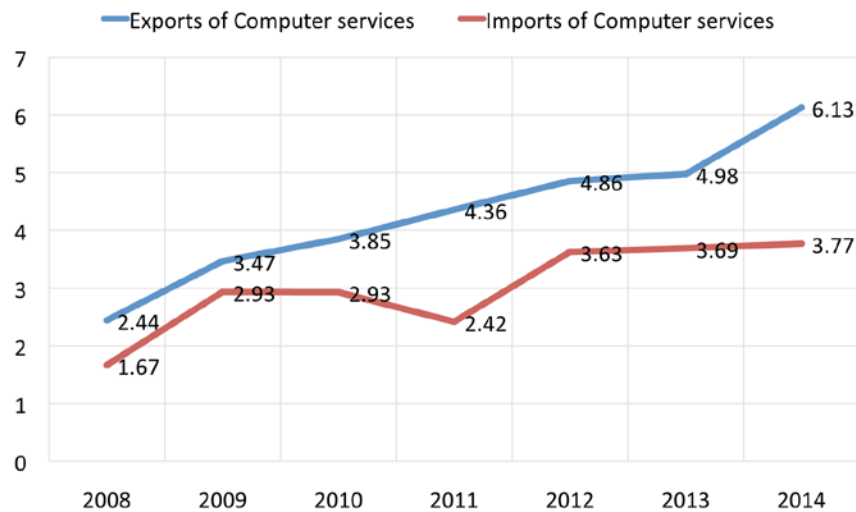
### 3.1.3 Contribution to foreign trade

The contribution of software and databases to foreign trade in goods is relatively modest. Out of all such activities, only software publishing is engaged in export/import operations. Thus, in 2014, exports of software amounted to only 0.93 million lei or 0.07 million US dollars (0.003 per cent of total exports), whereas the imports of such goods constituted 40.60 million lei or 2.9 million US dollars (0.055 per cent of total imports), as demonstrated in Chart 72.

**Chart 72: Exports and imports of software, % of total exports and imports of goods**

Source: Calculated by the authors based on NBS data

Computer services appears to be much more competitive than software and databases. Thus, during the review period (2008-2014), exports of such services consistently outpaced imports. In 2014, total exports of computer services amounted to 825 million lei or 58.8 million US dollars, whereas imports totaled 524 million lei or 37.4 million US dollars. Moreover, the shares of these exports and imports in total foreign trade consistently increased during 2008-2014 (Chart 73).

**Chart 73: Exports and imports of Computer Services, % of total exports and imports of services**

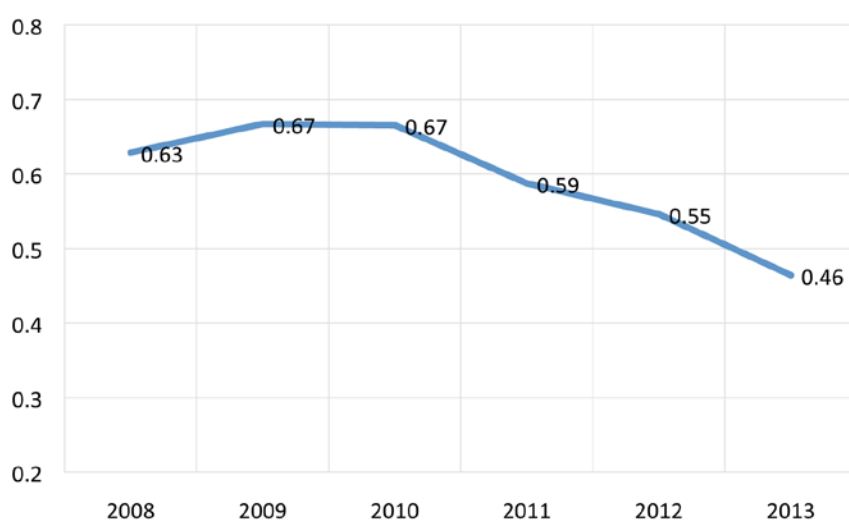
Source: Calculated by the authors based on NBS data

Software and databases is the largest copyright industry in Moldova in terms of GVA and the second largest in terms of employment. During the review period (2008-2013), both indicators followed clear upward trends, revealing the strength of this sector and its dynamic development. This was mainly due to increasing investments in the sector, including foreign direct investment owing to the availability of relatively cheap labor. An additional boost to the competitiveness of the software and databases industry was given by the Government in the form of a series of fiscal incentives, offered in particular during 2005-2011 (the incentives started to be gradually wound down from 2012). Although labor productivity in this industry is much higher than the national average, its trend during the review period is worrisome: it suffered a severe blow during the economic crisis of 2009 and has continued to decline to date. This highlights the need to adjust fiscal mechanisms so as to strengthen the incentives to invest in and improve the efficiency of the industry.

## 3.2 Press and literature

### 3.2.1 Contribution to gross value added

Press and literature is the second largest copyright industry in terms of gross value added; in 2013, it accounting for about 388.62 million lei or 30.9 million US dollars and 0.46 per cent of total GVA. However, during recent years, its value has declined; in nominal terms it has shrunk from 401.80 million lei or 34.2 million US dollars in 2011, and as a contribution to total GVA it has shrunk from its high of 0.67 per cent in 2010 (Chart 74).

**Chart 74: Contribution to GDP and GVA of the press and literature industry, per cent**

Source: Calculated by the authors based on NBS data

Although press and literature is composed of a large number of activities, about two thirds of GVA is created by the two largest industries: (i) retail sale of books, newspapers and stationery, which gradually expanded from 81.98 million lei or 7.9 million US dollars in 2008 to 131.88 million lei or 10.5 million US dollars in 2013; and (ii) printing n.e.c., which expanded from 49.01 million lei or 4.7 million US dollars in 2008 to 121.29 million lei or 9.6 million US dollars in 2013. At the same time, the declining contribution to economic growth of press and literature was due to the performance of a number of smaller industries: publishing of newspapers, publishing of books, printing of newspapers, and publishing of journals and periodicals (Table 24).

**Table 24: GVA in press and literature, thousand lei**

Code	Description	2008	2009	2010	2011	2012	2013
22.11	Publishing of books	37,651	17,509	24,554	23,530	20,861	13,693
22.12	Publishing of newspapers	60,028	81,432	60,438	47,460	43,521	39,821
22.13	Publishing of journals and periodicals	25,139	11,537	18,809	12,821	11,079	10,361
22.15	Other publishing	11,540	10,108	29,957	20,477	11,718	13,018
22.21	Printing of newspapers	27,819	47,354	50,859	14,994	33,705	21,394
22.22	Printing n.e.c.	49,091	49,647	61,997	139,208	123,248	121,290
22.23	Bookbinding	761	1,181	946	774	501	300
22.24	Pre-press activities	1,400	2,363	1,762	2,959	4,317	4,399
22.25	Ancillary activities related to printing	14,511	12,843	14,252	11,010	6,895	8,867
52.47	Retail sale of books, newspapers and stationery	81,976	82,077	117,353	112,973	119,228	131,883
52.50	Retail sale of second-hand goods in stores	9	37	56	120	114	275
74.87	Other business activities n.e.c.	6,789	5,559	8,241	8,042	7,707	6,931
92.31	Artistic and literary creation and interpretation	8,387	14,057	6,157	5,014	14,342	13,370
92.40	News agency activities	407	2,801	3,249	3,190	5,300	2,783
92.51	Library and archives activities	42	532	211	156	187	235
<b>Press and literature</b>		<b>325,550</b>	<b>339,037</b>	<b>398,841</b>	<b>401,799</b>	<b>402,537</b>	<b>388,619</b>

Source: Calculated by the authors based on NBS data

The retail sale of books, newspapers and stationery and printing n.e.c., which are the most important activities in the press and literature sector, accounted for 0.16 per cent and 0.14 per cent respectively of the total GVA in 2013. The share of the retail sale of books, newspapers and stationery was volatile during 2008-2013, with a decline from 2010 when it accounted for 0.2 per cent of GVA. The share of printing not elsewhere classified declined from 0.2 per cent in 2011, but it remained higher than in 2008 (0.09 per cent).

**Table 25: GVA, % of total GVA**

Code	Description	2008	2009	2010	2011	2012	2013
22.11	Publishing of books	0.073	0.034	0.041	0.034	0.028	0.016
22.12	Publishing of newspapers	0.116	0.160	0.101	0.069	0.059	0.048
22.13	Publishing of journals and periodicals	0.049	0.023	0.031	0.019	0.015	0.012
22.15	Other publishing	0.022	0.020	0.050	0.030	0.016	0.016
22.21	Printing of newspapers	0.054	0.093	0.085	0.022	0.046	0.026
22.22	Printing n.e.c.	0.095	0.098	0.103	0.204	0.167	0.145
22.23	Bookbinding	0.0015	0.0023	0.0016	0.0011	0.0007	0.0004
22.24	Pre-press activities	0.003	0.005	0.003	0.004	0.006	0.005
22.25	Ancillary activities related to printing	0.028	0.025	0.024	0.016	0.009	0.011
52.47	Retail sale of books, newspapers and stationery	0.158	0.162	0.196	0.165	0.162	0.158
52.50	Retail sale of second-hand goods in stores	0.00002	0.00007	0.00009	0.00018	0.00015	0.00033
74.87	Other business activities n.e.c.	0.013	0.011	0.014	0.012	0.010	0.008
92.31	Artistic and literary creation and interpretation	0.016	0.028	0.010	0.007	0.019	0.016
92.40	News agency activities	0.001	0.006	0.005	0.005	0.007	0.003
92.51	Library and archives activities	0.00008	0.00105	0.00035	0.00049	0.00063	0.00028
<b>Press and literature</b>		<b>0.629</b>	<b>0.667</b>	<b>0.666</b>	<b>0.588</b>	<b>0.546</b>	<b>0.464</b>

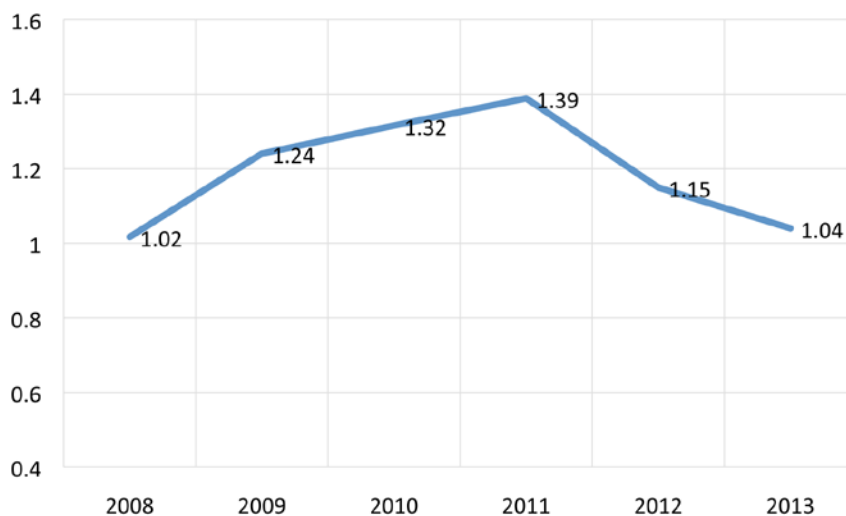
Source: Calculated by the authors based on NBS data

### 3.2.2 Contribution to employment

The press and literature industry is the largest employer out of all of the copyright activities. In 2013, it employed about 11,400 people (FTE), which is lower than in 2008 when it employed 12,000 people, and especially compared to 2011 when it employed 15,100 people. In 2013, it represented about 1.04 per cent of total employment, with a gradual decline since 2011 (Chart 75).



**Chart 75: Employment in press and literature, % of total employment**



Source: Calculated by the authors based on NBS data

Comparing the types of activity that make up GVA and employment in press and literature reveals certain structural issues. From Table 26, it is evident that the main employer in the press and literature sector is libraries and archives: in 2013, it employed 5,600 people, representing about 49 per cent of employment in press and literature. At the same time, this is one of the smallest industries in terms of contribution to GVA, accounting for only 0.06 per cent of GVA created by press and literature. Libraries and archives are mostly state-owned, making this sector very rigid and a major source of inefficiency. Moreover, during 2008-2013, this sector expanded in terms of the number of people employed (from 5,410 to 5,600 people), and in terms of its share in total press and literature employment (from 44.9 per cent to 49.0 per cent).

As shown in Table 26, another important activity in the press and literature industry is retail sale of books, newspapers and stationery (1,800 people in 2013), which also leads in terms of GVA created. This activity is followed by artistic and literary creation and interpretation (1,560 people in 2013), but the latter's contribution to GVA is more modest.

**Table 26: Employment in press and literature, thousand people**

Code	Description	2008	2009	2010	2011	2012	2013
22.11	Publishing of books	0.39	0.56	1.09	0.90	0.19	0.35
22.12	Publishing of newspapers	2.28	1.68	1.12	0.74	0.72	0.63
22.13	Publishing of journals and periodicals	0.12	0.12	0.15	0.16	0.14	0.17
22.15	Other publishing	0.05	0.12	0.30	0.03	0.02	0.15
22.21	Printing of newspapers	0.07	0.22	0.47	0.64	0.46	0.07
22.22	Printing n.e.c.	0.59	0.90	0.98	1.60	1.85	0.93
22.23	Bookbinding	0.02	1.18	0.08	0.00	0.02	0.01
22.25	Ancillary activities related to printing	0.10	0.15	0.18	0.20	0.10	0.02
52.47	Retail sale of books, newspapers and stationery	1.51	1.82	3.17	3.66	2.60	1.80
52.50	Retail sale of second-hand goods in stores	0.05	0.03	0.01	0.04	0.02	0.00
74.87	Other business activities n.e.c.	0.03	0.05	0.03	0.09	0.13	0.09
92.31	Artistic and literary creation and interpretation	1.31	1.36	1.56	1.62	1.21	1.56
92.40	News agency activities	0.13	0.05	0.04	0.07	0.03	0.03
92.51	Library and archives activities	5.41	5.55	4.91	5.98	4.95	5.60
<b>Press and literature</b>		<b>12.03</b>	<b>13.78</b>	<b>14.10</b>	<b>15.71</b>	<b>12.45</b>	<b>11.43</b>

Source: Calculated by the authors based on NBS data

The main employer in the press and literature industry – library and archives activities – contributed 0.51 per cent to total employment in 2013, and was very volatile during 2008-2013. The shrinking contribution to total employment of press and literature registered in 2012-2013 was largely due to the decline in the shares of retail sale of books, newspapers and stationery, and of printing n.e.c. (Table 22).

**Table 27: Employment in press and literature, % of total employment**

Code	Description	2008	2009	2010	2011	2012	2013
22.11	Publishing of books	0.03	0.05	0.10	0.08	0.02	0.03
22.12	Publishing of newspapers	0.19	0.15	0.11	0.07	0.07	0.06
22.13	Publishing of journals and periodicals	0.01	0.01	0.01	0.01	0.01	0.02
22.15	Other publishing	0.00	0.01	0.03	0.00	0.00	0.01
22.21	Printing of newspapers	0.01	0.02	0.04	0.06	0.04	0.01
22.22	Printing n.e.c.	0.05	0.08	0.09	0.14	0.17	0.09
22.23	Bookbinding	0.00	0.11	0.01	0.00	0.00	0.00
22.25	Ancillary activities related to printing	0.01	0.01	0.02	0.02	0.01	0.00
52.47	Retail sale of books, newspapers and stationery	0.13	0.16	0.30	0.32	0.24	0.16
52.50	Retail sale of second-hand goods in stores	0.00	0.00	0.00	0.00	0.00	0.00
74.87	Other business activities n.e.c.	0.00	0.01	0.00	0.01	0.01	0.01
92.31	Artistic and literary creation and interpretation	0.11	0.12	0.15	0.14	0.11	0.14
92.40	News agency activities	0.01	0.01	0.00	0.01	0.00	0.00
92.51	Library and archives activities	0.46	0.50	0.46	0.53	0.46	0.51
<b>Press and literature</b>		<b>1.02</b>	<b>1.24</b>	<b>1.32</b>	<b>1.39</b>	<b>1.15</b>	<b>1.04</b>

Source: Calculated by the authors based on NBS data

The efficiency issues related to library and archives activities are confirmed by the productivity indicator (GVA per employee), which was the lowest of all press and literature activities during the review period (2008-2013). Other sectors with very low productivity are artistic and literary creation and interpretation and bookbinding. At the same time, the highest productivity gains were registered by ancillary activities related to printing and printing of newspapers (Table 28).

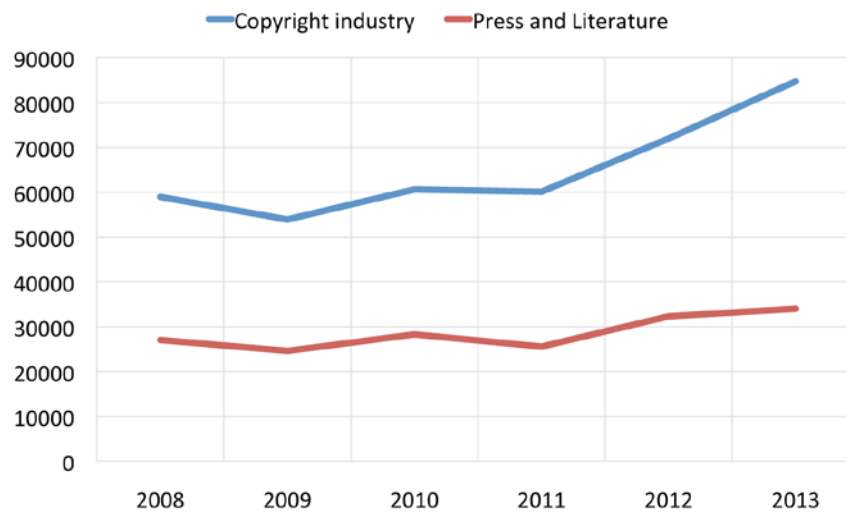
**Table 28: Labor productivity of press and literature, lei**

Code	Description	2008	2009	2010	2011	2012	2013
22.11	Publishing of books	95,989.53	31,392.69	22,483.05	26,230.55	108,357.92	38,587.85
22.12	Publishing of newspapers	26,278.79	48,502.32	53,731.33	63,983.67	60,118.90	63,342.93
22.13	Publishing of journals and periodicals	208,096.80	99,887.91	124,910.64	79,587.89	76,943.72	60,964.67
22.15	Other publishing	251,346.84	84,656.10	101,549.21	777,366.63	520,104.29	84,529.55
22.21	Printing of newspapers	421,084.77	215,864.24	107,981.91	23,542.78	73,108.15	316,152.73
22.22	Printing n.e.c.	83,276.31	55,009.33	63,553.51	87,144.41	66,560.54	129,927.34
22.23	Bookbinding	44,777.29	1,005.10	11,510.92	16,506.62	22,794.19	24,976.30
22.25	Ancillary activities related to printing	146,574.65	87,969.01	78,307.86	55,326.34	69,048.87	377,373.50
52.47	Retail sale of books, newspapers and stationery	54,309.24	45,006.49	37,042.63	30,873.24	45,876.29	73,068.99
52.50	Retail sale of second-hand goods in stores	182.75	1,154.90	4,469.06	3,141.64	4,941.90	62,663.54
74.87	Other business activities n.e.c.	267,162.67	109,021.90	268,157.28	84,812.50	61,309.29	77,455.09
92.31	Artistic and literary creation and interpretation	6,422.48	10,355.35	3,935.20	3,102.56	11,841.25	8,581.07
92.40	News agency activities	3,180.12	54,917.09	89,568.86	47,825.58	170,974.36	111,327.60
92.51	Library and archives activities	7.69	95.91	42.91	50.23	66.13	41.93
<b>Press and literature</b>		<b>27,044.60</b>	<b>24,607.18</b>	<b>28,291.25</b>	<b>25,574.22</b>	<b>32,323.95</b>	<b>34,011.89</b>

Source: Calculated by the authors based on NBS data

Despite the positive performance of the most productive press and literature activities over the last few years, the industry's total productivity during the review period (2008-2013) was consistently lower than productivity for the entire copyright sector. Moreover, starting from 2011, the gap has expanded, suggesting that productivity declines in the most important press and literature activities have not been counterbalanced by productivity gains in other small activities (Chart 76).

**Chart 76: Labor productivity in press and literature and in all CI, lei**

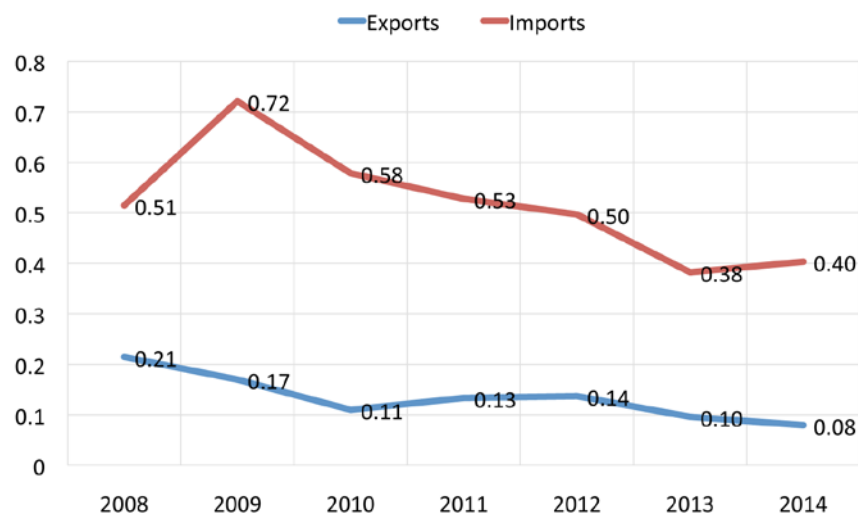


Source: Calculated by the authors based on NBS data

### 3.2.3 Contribution to foreign trade

In 2014, press and literature exports represented about 26.28 million lei or 1.9 million US dollars, which is significantly lower than in 2008 when they amounted to 36.52 million lei or 3.5 million US dollars. Imports of press and literature in 2014 totaled 297.76 million lei or 21.2 million US dollars, and were also lower than in 2008 (256.28 million lei or 25 million US dollars). Press and literature makes a modest and declining contribution to foreign trade, accounting for only 0.08 per cent of total exports and 0.4 per cent of total imports. As demonstrated by Chart 77, the gap between exports and imports shrank slightly during 2008-2013. Still, this was not so much due to competitiveness gains as to the fact that the contribution to imports decreased faster than the contribution to exports.

**Chart 77: Contribution of press and literature to foreign trade in goods, %**



Source: Calculated by the authors based on NBS data

The most important exported items are books (12.15 million lei or 0.87 million US dollars in 2014), journals and periodicals (8.53 million lei or 0.61 million US dollars in 2014) and other printed items (4.63 million lei or 0.33 million US dollars in 2014). All of these exports declined during the review period (2008-2014), influencing the overall decline in press and literature exports (Table 29).

**Table 29: Exports of press and literature, million lei**

Code	Description	2008	2009	2010	2011	2012	2013	2014
22.11	Publishing of books	20.19	7.92	4.93	11.98	26.23	13.08	12.15
22.12	Publishing of newspapers	0.04	0.04	0.02	0.00	0.00	0.00	0.00
22.13	Publishing of journals and periodicals	7.59	11.42	8.67	18.21	6.11	10.65	8.53
22.15	Other publishing	0.32	0.06	0.17	0.40	0.51	0.83	0.88
22.22	Printing n.e.c.	8.21	5.64	7.52	4.97	3.94	5.25	4.63
22.24	Pre-press activities	0.05	0.09	0.11	0.04	0.13	0.03	0.09
92.31	Artistic and literary creation and interpretation	0.13	0.02	0.04	0.01	0.06	0.01	0.00
<b>Press and literature</b>		<b>36.52</b>	<b>25.19</b>	<b>21.46</b>	<b>35.61</b>	<b>36.98</b>	<b>29.85</b>	<b>26.28</b>

Source: Calculated by the authors based on NBS data

The contribution to total exports of the most important press and literature items also declined during 2008-2014. Thus, the share of exports of books in total exports shrank from 0.12 per cent in 2008 to 0.04 per cent in 2014; the share of journals and periodicals shrank from 0.04 per cent in 2008 to 0.03 per cent in 2014; and the share of other printing items shrank from 0.05 per cent in 2008 to 0.01 per cent in 2014 (Table 30).

**Table 30: Exports of press and literature, % of total exports**

Code	Description	2008	2009	2010	2011	2012	2013	2014
22.11	Publishing of books	0.118	0.054	0.025	0.045	0.097	0.042	0.037
22.12	Publishing of newspapers	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22.13	Publishing of journals and periodicals	0.044	0.077	0.044	0.068	0.023	0.034	0.026
22.15	Other publishing	0.002	0.000	0.001	0.001	0.002	0.003	0.003
22.22	Printing n.e.c.	0.048	0.038	0.038	0.019	0.015	0.017	0.014
22.24	Pre-press activities	0.000	0.001	0.001	0.000	0.000	0.000	0.000
92.31	Artistic and literary creation and interpretation	0.001	0.000	0.000	0.000	0.000	0.000	0.000
<b>Press and literature</b>		<b>0.214</b>	<b>0.171</b>	<b>0.109</b>	<b>0.133</b>	<b>0.137</b>	<b>0.096</b>	<b>0.080</b>

Source: Calculated by the authors based on NBS data

The structure of imports is similar to that of exports. Thus, the most important imported press and literature items are books (65.31 million lei or 4.65 million US dollars in 2014), journals and periodicals (37.44 million lei or 2.67 million US dollars in 2014) and other types of printing items (175.50 million lei or 12.50 million US dollars in 2014). As with exports, all types of imports decreased during the review period (Table 31).

**Table 31: Imports of press and literature, million lei**

Code	Description	2008	2009	2010	2011	2012	2013	2014
22.11	Publishing of books	62.64	59.23	62.13	89.70	65.85	51.11	65.31
22.12	Publishing of newspapers	1.03	0.39	0.00	2.73	1.71	0.85	1.47
22.13	Publishing of journals and periodicals	62.14	62.52	51.47	60.65	51.64	49.08	37.44
22.15	Other publishing	6.33	7.54	9.50	7.22	9.32	11.35	12.79
22.22	Printing n.e.c.	125.58	130.89	145.60	154.98	178.73	146.29	175.50
22.24	Pre-press activities	1.48	2.15	2.79	2.96	2.96	3.05	5.17
92.31	Artistic and literary creation and interpretation	0.08	0.34	0.10	0.13	0.13	1.08	0.07
<b>Press and literature</b>		<b>259.28</b>	<b>263.07</b>	<b>271.59</b>	<b>318.36</b>	<b>310.33</b>	<b>262.79</b>	<b>297.76</b>

Source: Calculated by the authors based on NBS data

The contribution to total imports of the most important imported press and literature items also shrank during the review period. Thus, the share of imports of books in total imports decreased from 0.124 per cent in 2008 to 0.088 per cent in 2014; the share of imports of journals and periodicals decreased from 0.123 per cent in 2008 to 0.051 per cent in 2014; and the share of imports of other printed items shrank from 0.248 per cent in 2008 to 0.237 per cent in 2014. This to a large extent influenced the overall decline of the contribution of press and literature imports to total imports (Table 32).

**Table 32: Imports of press and literature, % of total imports**

Code	Description	2008	2009	2010	2011	2012	2013	2014
22.11	Publishing of books	0.124	0.163	0.132	0.148	0.106	0.074	0.088
22.12	Publishing of newspapers	0.002	0.001	0.000	0.005	0.003	0.001	0.002
22.13	Publishing of journals and periodicals	0.123	0.172	0.109	0.100	0.083	0.072	0.051
22.15	Other publishing	0.013	0.021	0.020	0.012	0.015	0.017	0.017
22.22	Printing n.e.c.	0.248	0.360	0.309	0.257	0.286	0.213	0.237
22.24	Pre-press activities	0.003	0.006	0.006	0.005	0.005	0.004	0.007
92.31	Artistic and literary creation and interpretation	0.000	0.001	0.000	0.000	0.000	0.002	0.000
<b>Press and literature</b>		<b>0.512</b>	<b>0.723</b>	<b>0.576</b>	<b>0.527</b>	<b>0.497</b>	<b>0.383</b>	<b>0.403</b>

Source: Calculated by the authors based on NBS data

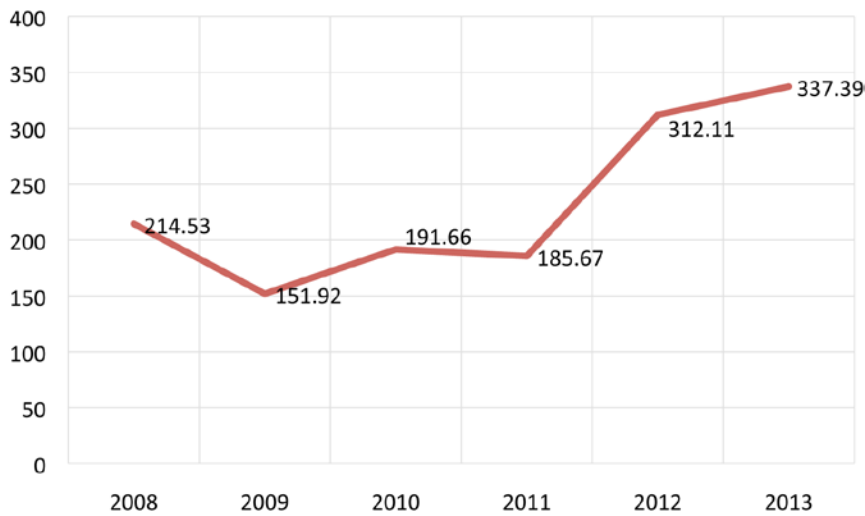
In conclusion, while being the largest employer and second largest copyright activity in terms of GVA, press and literature has evidenced some worrisome trends over the last few years, with a declining contribution to total GVA, GDP and employment. This is due in particular to the digitalization process, which led to declining demand for printed newspapers, journals and periodicals. A second issue is presented by the sector's low labor productivity, which is much worse than the copyright industry average; this gap has grown over recent years. Library and archives activities presents the main problem. This sector is mainly state-owned and accounts for about half of total employment in press and literature, with an insignificant contribution to value-added creation. This is one of the main reasons for the industry's poor labor productivity, which undermines its competitiveness. As a result, during the review period, it registered an increasingly negative balance of trade, while the contribution to total foreign trade shrank as well. These worrisome trends should be tackled through bold policy measures aimed at ensuring a structural reform of the industry, improving investment attractiveness and boosting productivity and competitiveness.

### 3.3 Advertising services

#### 3.3.1 Contribution to gross value added

Advertising services is the third largest copyright industry in terms of gross value added created. In 2013, this sector generated GVA of about 337.39 million lei or 26.8 million US dollars. Over the review period, GVA increased in nominal terms, especially from 2009, when GVA was half that in 2013 (Chart 78).

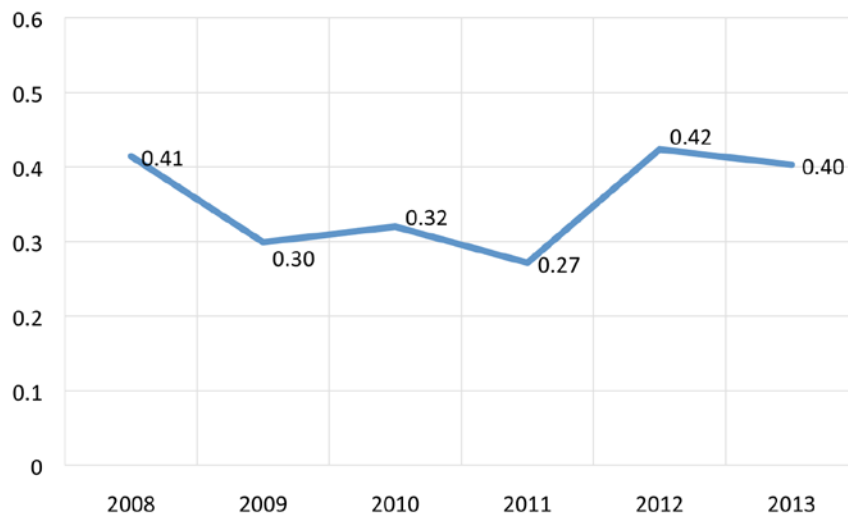
**Chart 78: GVA created by advertising Services, million lei**



Source: Calculated by the authors based on NBS data

In 2013, advertising services contributed 0.40 per cent of total GVA and 0.34 per cent of GDP. During the review period (2008-2013), its share of GVA and GDP was very volatile (Chart 79). The only episodes of growth were reported in 2010 (the share of GVA increased from 0.30 per cent in 2009 to 0.32 per cent in 2010, and the share of GDP increased from 0.25 per cent in 2009 to 0.27 per cent in 2010) and 2012 (the share of GVA jumped from 0.27 per cent in 2011 to 0.42 per cent in 2012, and the share of GDP jumped from 0.23 per cent in 2011 to 0.35 per cent in 2012).

**Chart 79: Share of advertising services GVA in total GVA and GDP (%)**



Source: Calculated by the authors based on NBS data

### 3.3.2 Contribution to employment

The growth in GVA fueled demand for labor by the advertising services industry. Thus, in 2013 it employed 3,130 people (in FTE), 1.6 times more than in 2008 (1,960 people). The industry also expanded its contribution to total employment: the share of people working in advertising services in total employment increased from 0.17 per cent in 2008 to 0.29 per cent in 2013 (Table 31).

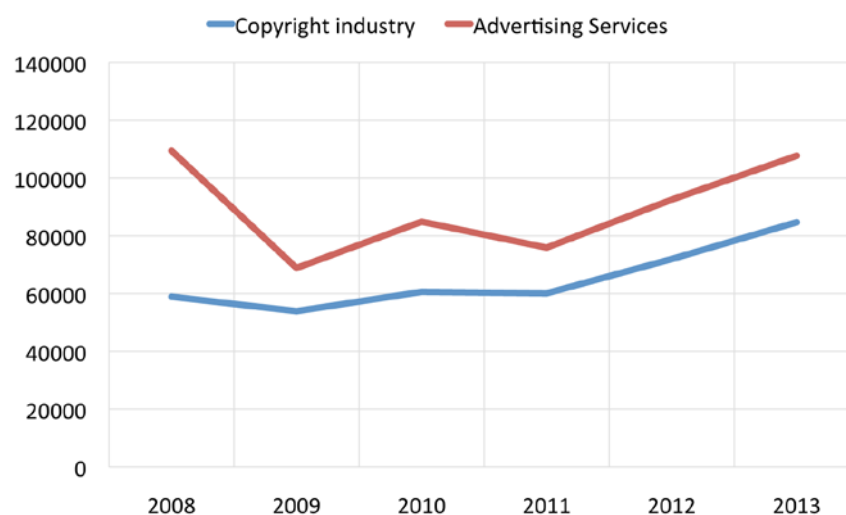
**Table 33: Employment in advertising services (FTA)**

	Employees, thousand	Share in total employment, per cent
2008	1.96	0.17
2009	2.21	0.20
2010	2.26	0.21
2011	2.45	0.22
2012	3.37	0.31
2013	3.13	0.29

Source: Calculated by the authors based on NBS data

Industry productivity increased during 2009-2013 but did not recover to the higher pre-crisis, 2008 level (Chart 80). Nevertheless, advertising services registered much higher productivity levels than the rest of the copyright sector.

**Chart 80: Productivity of advertising services and of CI, lei**



Source: Calculated by the authors based on NBS data

In conclusion, the advertising industry, as Moldova's third largest copyright industry in terms of GVA, registered prominent growth and an expanding contribution to GVA, GDP and employment. It also reported important efficiency gains, with labor productivity consistently outpacing average levels in the copyright industries. These prominent trends are the result of growing demand that boosted investment and bode well for the sustained development of the sector in the near future.



## 4. Conclusions and Recommendations

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*This section summarizes the key conclusions and recommendations for strengthening the copyright industries in Moldova. The calculations conducted in this report could serve as the basis for a comprehensive copyright development strategy and could enable policy makers to anchor their interventions in the real needs of the industries.*

- Over recent years, the legal framework for intellectual property rights protection has undergone a qualitative restructuring, with a new Copyright Law adopted in 2010 in line with EU directives in this field. Moreover, the process of harmonization with EU standards has continued with the commitments under the Association Agreement recently signed by Moldova and the European Union. The key challenge in this regard is the legislation's effective enforcement, which will determine whether the sector develops sustainably from now on.
- The calculations reveal that the copyright industries make an important contribution to the Moldovan economy, accounting for 3.98 per cent of total GVA and 3.31 per cent of GDP. Still, this level is lower than in most countries in the region. Thus, in terms of share of GVA, Moldova has outpaced Ukraine (2.85 per cent) and Bulgaria (2.81 per cent) but lags behind Russia (6.06 per cent) and Romania (5.55 per cent). Furthermore, Moldova lags behind most countries in the region in terms of the copyright industries' contribution to total employment. Thus, with a share of 3.58 per cent of total employment, Moldova only outpaces Ukraine (1.9 per cent), and lags behind Russia (7.3 per cent), Bulgaria (4.92 per cent) and Romania (4.19 per cent).
- During 2008-2013, the copyright industries' share in the national economy declined, while efficiency improved. It registers higher labor productivity than the economy's average, and the gap has continuously expanded since 2011. Additionally, while lagging behind most countries in the region by size of its copyright industry, Moldova is positioned close to the regional average in terms of this industry's labor productivity. Hence, policy measures in this field should primarily focus on further enhancing the industry's efficiency indicators and boosting the value added of copyright goods and services.
- A smaller but more efficient copyright sector became increasingly apparent during the review period: its share of total exports increased from 4.59 per cent in 2008 to 8.63 per cent in 2014; its share of total imports increased from 6.61 per cent in 2008 to 9.54 per cent in 2014. This was mainly due to the rising competitiveness of copyright services, which reported a positive trade balance, whereas, owing to declines in competitiveness, copyright goods registered a highly negative trade balance.
- Of all four types of CI, the most important is core CI, with a share of 66.86 per cent in total GVA and 69.29 per cent of total employment. Additionally, this is the only type of CI to increase its contribution to the national economy during 2008-2013, whereas the contributions of interdependent, partial and non-dedicated support CI shrank, resulting in the declining contribution of the entire copyright sector. At the same time, although it is the largest group, core CI is not the most efficient and ranks third in terms of productivity levels. Hence, policy measures targeting core CI should aim to foster efficiency, either by increasing value added or by optimizing employment in some state-owned copyright activities (especially in press and literature and radio and television).
- In contrast, policy measures should focus on increasing the size of the other three types of CI (interdependent, partial and non-dedicated support copyright industries). Compared to other countries in the region, Moldova's entire copyright sector is relatively concentrated on core CI, which expanded during 2008-2013 whereas the other types of CI accounted for a relatively modest share of the industry which decreased over the same period of time.
- Software and databases is the largest copyright industry in Moldova in terms of GVA and the second largest in terms of employment, and has relatively high productivity levels compared to the economy's average. This performance was due to the mixture of competitive advantages conferred by the availability of cheap labor and strong fiscal incentives granted by the Government. However, during the review period, productivity levels decreased, pointing to the need to rethink policies in this sector. Hence, it is

necessary to adjust existing fiscal mechanisms by focusing more on investment incentives and improving efficiency.

- Press and literature is the second largest copyright activity in terms of GVA and the largest in terms of employment. However, it registers one of the lowest productivity levels, owing primarily to the library and archives activities sector, which represents about half of total employment in press and literature and is mainly state-owned. As a result, the labor productivity of the press and literature industry lagged behind the average in the copyright sector. It undermined the copyright sector's competitiveness, leading to the accumulation of a negative trade balance, with imports visibly outpacing exports. Another issue that hampered the development of press and literature was the decline in demand for printed newspapers, journals and periodicals due to digitalization. These worrisome trends should be tackled by bold policy measures to ensure the industry's structural reform, improve investment attractiveness and boost productivity and competitiveness, with a focus on increasing value added in library and archives activities.
- Advertising services is the third largest copyright industry in terms of gross value added and the fourth in terms of employment. During the review period, it posted prominent growth in terms of contribution to total GVA and employment, and maintained its relatively high productivity levels. Like other copyright activities, the development of advertising services could be boosted by horizontal policy measures to improve the enforcement of copyright regulations and more effective intellectual property rights protection.

Specific recommendations on measuring and monitoring the economic contribution of copyright industries:

- Conduct bi-annual assessments of the economic contribution of copyright industries using the methodology described in this report. These should be commissioned by the AGEPI, with the involvement of in-house and independent copyright and statistics experts. This would allow the identification of trends in the various types of copyright industry and activity, measure the impact of various policy interventions and serve as a basis for potential laws and regulations in this field.
- In order to facilitate the annual assessment of copyright industries' economic contribution, it is necessary to improve copyright statistics and ensure their publication on the NBS website. In particular, a national statistics compendium for Moldovan copyright industries needs to be issued every five years. This would ease access for policy makers, experts and the general public to a rich and important dataset for measuring and monitoring the trends in the copyright sector.
- It is necessary to establish closer collaboration between the NBS and the National Bank of Moldova to produce a single dataset on foreign trade involving copyright services.
- It is necessary to intensify research into copyright factors. In this regard, AGEPI, together with the NBS, could conduct periodic (e.g. once every two years) nationally representative surveys among enterprises with a view to depicting and regularly updating the copyright factors for every economic activity at the level of four-digit NACE codes.
- AGEPI should maintain close communication with the WIPO on methodological developments related to measuring the economic contribution of copyright industries.

Specific recommendations on policy interventions in the copyright industries:

- Strengthen the institutional setting for copyright protection:
  - Set up a department in the Ministry of Economy that would be in charge of drafting and promoting strategies and policies for the development of creative industries.
  - Assign to the copyright working group within the National Intellectual Property Commission the task of studying, analyzing and recommending the best solutions for the development of creative industries.
  - Organize sector associations and promote the association of all creative industries, in line with the European model.

- Develop effective policies on creative industries:
  - Develop a National Strategy on Creative Industries Development.
  - Identify, together with the NBS, statistical indicators for creative industries and set up a system for monitoring and collecting the data concerned.
  - Conduct a comprehensive analysis of statistical and real market data to identify quick and efficient interventions to develop creative industries.
- Provide support to small and medium enterprises:
  - Promote support initiatives for small and medium enterprises.
  - Launch national projects on creative industries development.
  - Identify advantageous financing options.
  - Mediate cooperation between creative industries and financial institutions.
  - Develop a database for accessing international financing projects, business angel platforms, venture capital and modern payment systems.
  - Identify and implement fiscal support mechanisms, including the simplification of the tax system.
  - Provide support in building creative business skills.
- Provide support for enterprises that have market experience:
  - Provide support to diversify the market.
  - Develop a practical guide for exporting creative products and services.
- Develop relationships between creative and other similar industries:
  - Set up creative clusters in order to identify the best practices and encourage exchanges of experience.
  - Expand the use of informational technologies in order to benefit from the best business models.
  - Establish relationships with other national industries.
- Promote national creative industries:
  - Identify the specific characteristics of creative industries in order to promote their image.
  - Organize festivals or other events promoting national creative goods and services.
  - Organize an annual forum involving representatives from all creative fields.
  - Encourage collaboration between the relevant public authorities and the private sector.
  - Support the participation of creative industries at international exhibitions.
- Strengthen the tax law and the Law on Copyright and Related Rights:
  - Review the copyright law to remove any impediments hindering the development of creative industries.
  - Develop proposals for tax law amendment in order to support creative industries.
  - Identify other support mechanisms for authors and artists.

- Develop the collective management of copyright:
  - Institutionalize a mediation system for disputes between collective management societies and the users of objects subject to copyright and related rights.
  - Provide support to collective management societies in order to develop their ability to collect and distribute royalties in a transparent fashion.
- Promote creativity among young people:
  - Promote cultural diversity and social inclusion policies, especially for the younger generation.
  - Develop specialized creative management courses in universities and introduce this specialty into some departments of the Technical University of Moldova and the Academy of Music, Theatre and Fine Arts.
  - Set up creativity and innovation clubs in Moldovan high schools.
- Develop regional projects: create and develop the concept of creative and innovative cities/towns/villages.

## Annex A Notes on Methodology

This Annex outlines the key methodological concepts and procedures which were used for the purposes of the report. It provides the definition of copyright industries, the data sources used, the relevant characteristics of the available datasets and the methodology for deriving copyright industries' GVA, employment and foreign trade estimates. The methodology is based on the one used in the similar report commissioned by WIPO in 2012 for Lithuania<sup>26</sup> given its high quality, detailed methodological notes and the fact that the Lithuanian economy is not very different from the Moldovan. The methodology was adjusted to the national context after a series of consultations with specialists from the Moldovan National Bureau of Statistics.<sup>27</sup>

### Defining the copyright industries

The copyright industries are defined on the basis of four-digit NACE codes (rev. 1.1). The list draws on the industry classification set out in Annex 2 of the WIPO Guide, which was extended in the Lithuanian study, with adjustments to the Moldovan economy. Thus, we distinguish four types of copyright industry (CI):

- I. Core;
- II. Interdependent;
- III. Partial; and
- IV. Non-dedicated support.

Each type of copyright industry is divided into more detailed activities, which are listed in Tables 32, 33, 34 and 35. Following the methodology from the Lithuanian study, we attributed a four-digit NACE (rev. 1.1) code to each activity. In addition, the economic contribution of selected copyright activities is attributed to several copyright industries. These copyright activities are identified by the word 'shared' in the 'attribution' column, whereas the remaining ones are marked by the word 'single'.

**Table 34: Core CI**

Corresponding NACE codes and activity names		Attribution
<b>1. Press and literature</b>		
22.11	Publishing of books	Single
22.12	Publishing of newspapers	Single
22.13	Publishing of journals and periodicals	Single
22.15	Other publishing	Single
22.21	Printing of newspapers	Single
22.22	Printing n.e.c.	Single
22.23	Bookbinding	Single
22.24	Pre-press activities	Single
22.25	Ancillary activities related to printing	Single
52.47	Retail sale of books, newspapers and stationery	Single
52.50	Retail sale of second-hand goods in stores	Shared
74.87	Other business activities n.e.c.	Shared
92.31	Artistic and literary creation and interpretation	Shared
92.40	News agency activities	Single
92.51	Library and archives activities	Single

<sup>26</sup> Developed by Rimantas Juozas Vaicenavicius, who advised the authors of this report throughout the research and report preparation stages, including giving methodological advice on data and method selection.

<sup>27</sup> Iurie Mocanu, Head of the Enterprises Structural Statistics Department; Valentina Ghidilica, Head of the National Accounts Department; and Elena Vatcarau, Head of the Labor Force Statistics Department.

**Table 34: Core CI (continued)**

<b>2. Music, theatrical productions, operas</b>		
22.14	Publishing of sound recordings	Single
51.43	Wholesale of electrical household appliances and radio and television goods	Shared
52.45	Retail sale of electrical household appliances and radio and television goods	Shared
74.87	Other business activities n.e.c.	Shared
92.31	Artistic and literary creation and interpretation	Shared
92.32	Operation of arts facilities	Single
92.34	Other entertainment activities n.e.c.	Single
<b>3. Motion picture and video</b>		
22.32	Reproduction of video recording	Single
51.43	Wholesale of electrical household appliances and radio and television goods	Shared
74.87	Other business activities n.e.c.	Shared
92.11	Motion picture and video production	Single
92.12	Motion picture and video distribution	Single
92.13	Motion picture projection	Single
92.31	Artistic and literary creation and interpretation	Shared
<b>4. Radio and television</b>		
92.20	Radio and television activities	Single
<b>5. Photography</b>		
74.81	Photographic activities	Single
<b>6. Software and databases</b>		
22.33	Reproduction of computer media	Single
72.21	Software publishing	Single
72.22	Other software consultancy and supply	Single
72.30	Data processing	Single
72.40	Database activities	Single
72.60	Other computer-related activities	Single
<b>7. Visual and graphic arts</b>		
74.87	Other business activities n.e.c.	Shared
92.31	Artistic and literary creation and interpretation	Shared
92.52	Museums activities and preservation of historical sites and buildings	Shared
<b>8. Advertising services</b>		
74.40	Advertising	Single
<b>9. Copyright collecting societies</b>		
74.87	Other business activities n.e.c.	Shared

**Table 35: Interdependent CI**

Corresponding NACE codes and activity names		Attribution
<b>1. TV sets, radios, VCRs, CD players, DVD players, cassette players, electronic gaming equipment and other similar equipment</b>		
32.30	Manufacture of television and radio receivers, sound or video recording or reproducing apparatus and associated goods	Single
51.43	Wholesale of electrical household appliances and radio and television goods	Shared
52.45	Retail sale of electrical household appliances and radio and television goods	Shared
<b>2. Computers and equipment</b>		
30.02	Manufacture of computers and other information processing equipment	Single
51.84	Wholesale of computers, computer peripheral equipment and software	Single
51.85	Wholesale of other office machinery and equipment	Shared
71.33	Renting of office machinery and equipment, including computers	Single
<b>3. Musical instruments</b>		
52.45	Retail sale of electrical household appliances and radio and television goods	Shared
<b>4. Photocopiers</b>		
30.01	Manufacture of office machinery	Shared
51.85	Wholesale of other office machinery and equipment	Shared
<b>5. Photographic and cinematographic instruments</b>		
33.40	Manufacture of optical instruments and photographic equipment	Single
<b>6. Blank recording material</b>		
24.64	Manufacture of photographic chemical material	Single
24.65	Manufacture of prepared unrecorded media	Single
<b>7. Paper</b>		
21.12	Manufacture of paper and paperboard	Single
24.30	Manufacture of paints, varnishes and similar coatings, printing ink and mastics	Single
29.55	Manufacture of machinery for paper and paperboard production	Single
51.56	Wholesale of other intermediate products	Single

**Table 36: Partial CI**

Corresponding NACE codes and activity names		Attribution
<b>1. Apparel, textiles and footwear</b>		
17.60	Manufacture of knitted and crocheted fabrics	Single
17.71	Manufacture of knitted and crocheted hosiery	Single
17.72	Manufacture of knitted and crocheted pullovers, cardigans and similar articles	Single
18.10	Manufacture of leather clothes	Single
18.21	Manufacture of workwear	Single
18.22	Manufacture of other outerwear	Single
18.23	Manufacture of underwear	Single
18.24	Manufacture of other wearing apparel and accessories n.e.c.	Single
19.30	Manufacture of footwear	Single
29.54	Manufacture of machinery for textile, apparel and leather production	Single
51.42	Wholesale of clothing and footwear	Single
52.41	Retail sale of textiles	Single

**Table 36: Partial CI (continued)**

52.42	Retail sale of clothing	Single
52.43	Retail sale of footwear and leather goods	Single
<b>2. Jewelry and coins</b>		
36.22	Manufacture of jewelry and related articles n.e.c.	Single
36.61	Manufacture of imitation jewelry	Single
<b>3. Other crafts</b>		
36.63	Other manufacturing n.e.c.	Single
<b>4. Furniture</b>		
36.11	Manufacture of chairs and seats	Single
36.12	Manufacture of other office and shop furniture	Single
36.13	Manufacture of other kitchen furniture	Single
36.14	Manufacture of other furniture	Single
36.15	Manufacture of mattresses	Single
51.85	Wholesale of other office machinery and equipment	Shared
52.44	Retail sale of furniture, lighting equipment and household articles n.e.c.	Shared
<b>5. Household goods, china and glass</b>		
20.51	Manufacture of other products of wood	Single
20.52	Manufacture of articles of cork, straw and plaiting materials	Single
26.12	Shaping and processing of flat glass	Single
26.13	Manufacture of hollow glass	Single
26.14	Manufacture of glass fibers	Single
26.15	Manufacture and processing of other glass, including technical glassware	Single
26.21	Manufacture of ceramic household and ornamental articles	Single
26.24	Manufacture of other technical ceramic products	Single
26.25	Manufacture of other ceramic products	Single
28.75	Manufacture of other fabricated metal products n.e.c.	Single
31.50	Manufacture of lighting equipment and electric lamps	Single
52.44	Retail sale of furniture, lighting equipment and household articles n.e.c.	Shared
<b>6. Wall coverings and carpets</b>		
17.51	Manufacture of carpets and rugs	Single
21.25	Manufacture of other articles of paper and paperboard n.e.c.	Single
<b>7. Toys and games</b>		
36.50	Manufacture of games and toys	Single
<b>8. Architecture, engineering, surveying</b>		
74.20	Architectural and engineering activities and related technical consultancy	Single
<b>9. Interior design</b>		
74.87	Other business activities n.e.c.	Shared
<b>10. Museums</b>		
52.50	Retail sale of second-hand goods in stores	Shared
92.52	Museums activities and preservation of historical sites and buildings	Shared



**Table 37: Non-dedicated support CI**

Corresponding NACE codes and activity names		Attribution
<b>1. General wholesale and retailing</b>		
51.11	Agents involved in the sale of agricultural raw materials, live animals, textile raw materials and semi-finished goods	Single
51.12	Agents involved in the sale of fuels, ores, metals and industrial chemicals	Single
51.13	Agents involved in the sale of timber and building materials	Single
51.14	Agents involved in the sale of machinery, industrial equipment, ships and aircraft	Single
51.15	Agents involved in the sale of furniture, household goods, hardware and ironmongery	Single
51.16	Agents involved in the sale of textiles, clothing, footwear and leather goods	Single
51.17	Agents involved in the sale of food, beverages and tobacco	Single
51.18	Agents specializing in the sale of particular products or ranges of products n.e.c.	Single
51.19	Agents involved in the sale of a variety of goods	Single
51.41	Wholesale of textiles	Single
51.43	Wholesale of electrical household appliances and radio and television goods	Shared
51.44	Wholesale of china and glassware, wallpaper and cleaning materials	Single
51.45	Wholesale of perfume and cosmetics	Single
51.46	Wholesale of pharmaceutical goods	Single
51.47	Wholesale of other household goods	Single
51.82	Wholesale of mining, construction and civil engineering machinery	Single
51.83	Wholesale of machinery for the textile industry and of sewing and knitting machines	Single
51.85	Wholesale of other office machinery and equipment	Shared
51.86	Wholesale of other electronic parts and equipment	Single
51.87	Wholesale of other machinery for use in industry, trade and navigation	Single
51.88	Wholesale of agricultural machinery and accessories and implements, including tract	Single
51.90	Other wholesale	Single
52.11	Retail sale in non-specialized stores with food, beverages or tobacco predominating	Single
52.12	Other retail sale in non-specialized stores	Single
52.45	Retail sale of electrical household appliances and radio and television goods Share	Shared
52.48	Other retail sale in specialized stores	Single
52.50	Retail sale of second-hand goods in stores	Shared
52.61	Retail sale via mail order houses	Single
52.62	Retail sale via stalls and markets	Single
52.63	Other non-store retail sale	Single
71.40	Renting of personal and household goods n.e.c.	Single
<b>2. General transportation</b>		
60.10	Transport via railways	Single
60.21	Other scheduled passenger land transport	Single
60.22	Taxi operation	Single
60.23	Other land passenger transport	Single
60.24	Freight transport by road	Single
61.10	Sea and coastal water transport	Single
61.20	Inland water transport	Single
62.10	Scheduled air transport	Single

**Table 37: Non-dedicated support CI (continued)**

62.20	Non-scheduled air transport	Single
63.11	Cargo handling	Single
63.12	Storage and warehousing	Single
63.21	Other supporting land transport activities	Single
63.22	Other supporting water transport activities	Single
63.23	Other supporting air transport activities	Single
63.30	Activities of travel agencies and tour operators; tourist assistance activities n.e.c.	Single
63.40	Activities of other transport agencies	Single
64.11	National post activities	Single
64.12	Courier activities other than national post activities	Single
<b>3. Telephony and internet</b>		
64.20	Telecommunications	Single

### Shared copyright activities

Sharing factors are assigned to a number of copyright activities which are relevant to more than one copyright industry. The attribution factors used for this study are based on the ones estimated in the similar study conducted for Lithuania, which has a comparable economic structure to Moldova (Table 38).

**Table 38: Distribution of shared copyright economic activities**

Industries and economic activities (explained in Tables 32, 33, 34 and 35).	Distribution	
	Value added, per cent	Employment, per cent
I.2	0.6	0.6
I.3	0.6	0.6
II.1	33.8	33.8
IV.1	65.0	65.0
<b>51.43</b>	100.0	100.0
II.2	35.1	15.2
II.4	5.0	5.0
III.4	59.9	79.8
<b>51.85</b>	100.0	100.0
III.4	42.6	57.2
III.5	57.4	42.8
<b>52.44</b>	100.0	100.0
I.2	2.4	2.4
II.1	30.9	30.9
II.3	1.7	1.7
IV.1	65.0	65.0
<b>52.45</b>	100.0	100.0
I.1	3.0	3.0
III.9	5.0	5.0
IV.1	92.0	92.0
<b>52.50</b>	100.0	100.0

**Table 38: Distribution of shared copyright economic activities (continued)**

I.1	5.1	12.8
I.2	5.6	3.5
I.3	13.5	5.9
I.7	10.8	12.8
I.9	4.5	4.5
III.10	7.0	7.0
<b>74.87</b>	<b>46.5</b>	<b>46.5</b>
I.1	20.5	51.2
I.2	22.4	14.0
I.3	54.0	23.7
I.7	3.1	11.0
<b>92.31</b>	<b>100.0</b>	<b>100.0</b>
I.7	80.0	80.0
III.9	20.0	20.0

### Copyright factors

Some economic activities specified in Tables 32, 33, 34 and 35 are not fully related to the copyright industries. This is quantified by means of copyright factors. While the first two types of copyright (core and interdependent copyright industries) have a copyright factor of one (their value is attributed entirely to copyright activities), the third and fourth types have copyright factors of less than one (their value is not entirely attributed to copyright activities).

The approach to estimating copyright factors for the partial CI consisted of two main steps.

In the first, main step, we took stock of the available disaggregated data on the products sold by the top 10 companies according to the sales turnover for each of the main partial copyright activities: (i) apparel, textiles and footwear, and (ii) furniture. The list of products is provided in Annex C and Annex D. In 2013, both copyright activities accounted for about two thirds of partial CI GVA. In this way, we obtained a comprehensive picture of the specific products produced by the most important partial copyright activities. This allowed for a more efficient estimation of the copyright components of the products identified. Thus, for each product identified, the AGEPI expert<sup>28</sup> provided his estimates of the appropriate copyright factors. As a result, for both partial copyright industries the copyright factor has been computed as the weighted average of copyright factors assigned to each product, based on the weights of each product in the total value of production.

While in the first step we obtained relatively accurate estimates of copyright factors for the two main partial copyright activities that account for two thirds of the partial CI GVA, in the second step we used a simpler approach to estimate the copyright factor for the remaining one third of partial CI GVA. In this case, the AGEPI expert assigned copyright factors which were approximated to each partial copyright activity at the level of four-digit NACE codes. Thus, the copyright factors for each copyright activity have been estimated as the weighted average of all of the copyright factors assigned to each economic activity at the level of four-digit NACE codes, using the weights of their value of production in total production. The copyright factors assigned are presented in Annex E.

In the end, we obtained a set of copyright factors that are relevant to Moldova (Table 39).

<sup>28</sup> Ion Tiganas, Deputy Director of the AGEPI.

**Table 39: Copyright factors for partial CI**

Copyright industry	Copyright factors
Apparel, textiles and footwear	0.008
Jewelry and coins	0.25
Other crafts	0.4
Furniture	0.05
Household goods, china and glass	0.21
Wall coverings and carpets	0.05
Toys and games	0.45
Architecture, engineering, surveying	0.15
Interior design	0.05
Museums	0.05

The estimated copyright factors do not differ much from those selected by other countries (Table 38).

**Table 40: Copyright factors used by selected countries**

Industry	Singapore	Latvia	Hungary	Jamaica	Bulgaria	Malaysia	China	Lithuania
Apparel, textiles & footwear	0.4%	0.4%	0.5%	0.5%	0.6%	15.0%	0.4%	0.6%
Jewelry & coins	25.2%	8.69%	25.0%	25.0%	20.0%		8.0%	20.0%
Other crafts	42.0%		40.0%		40.0%	26.7%	40.0%	40.0%
Furniture	5.0%	41.0%	5.0%	5.0%	5.0%	35.0%	5.0%	5.0%
Household goods, china & glass	0.6%		0.5%	0.5%	0.5%	0.4%	0.3%	0.5%
Wall coverings & carpets	1.7%	1.65%	2.0%	0.5%	0.4%	1.08%	2.0%	0.4%
Toys & games	42.0%	45.50%	50.0%	50.0%	40.0%	26.7%	40.0%	40.0%
Architecture	8.3%		10.0%	50.0%	10.0%	5.3%	6.0%	10.0%
Interior design	8.3%			2.0%		5.28%	5.0%	5.3%
Museums			50.0%	50.0%	50.0%		0.5%	50.0%
Miscellaneous manufacturing		45.5%						
Wholesale & retail of partial copyright industries			5.0%	5.0%				

Source: Brunei Darussalam Copyright Study commissioned by WIPO, 2011; The Economic Contribution of Copyright-Based Industries in Lithuania Study commissioned by WIPO, 2012

The copyright factors for the fourth type of copyright industry (non-dedicated support) have been estimated separately for each year (Table 41) following the WIPO methodology: the value added of the first three types was divided by the gross value added, minus the value added of the non-dedicated support CI:

$$\text{Copyright factor}_{\text{non-dedicated support}} = \frac{GVA_{\text{core}} + GVA_{\text{interdependent}} + GVA_{\text{partial}}}{GVA_{\text{economy}} - GVA_{\text{non-dedicated support}}}$$

**Table 41: Copyright factors for non-dedicated support CI**

Year	Copyright factor
2008	0.0339
2009	0.0337
2010	0.0331
2011	0.0312
2012	0.0340
2013	0.0340

### Data sources

All available data sources were used to gather data for the period 2008-2013, providing annual data for each year. The data were collected and computed by NBS experts for the purpose of this study.

In the case of GVA, the NBS publishes data at the level of two-digit NACE codes, which does not allow the contribution of copyright industries to be estimated. Hence, for the purpose of this study, the NBS experts computed GVA values at the level of four-digit NACE codes for each of the copyright industries mentioned in Tables 32, 33, 34 and 35.

In the case of employment, the NBS publishes two types of data: (i) data from structural business statistics, which are reported by firms and are not very accurate as they do not include informal employment and do not take into account the fact that some employees can have part-time jobs at more than one firm (these data are available on the NBS website at the level of two-digit NACE codes); and (ii) data from labor force surveys, which are conducted following ILO methodology, are reported by respondents and are considered much more accurate because they take into account the gaps in the business statistics explained above (these data are available at a very aggregated level – i.e. a one-digit code). Hence, the available statistics are not sufficient to compute the contribution of the copyright industries to total employment. Therefore, the NBS experts computed the employment figures obtained from the labor force survey at the level of four-digit NACE codes for each of the copyright industries mentioned in Tables 32, 33, 34 and 35, and converted them into full-time equivalents.

Publicly available data on foreign trade are also not sufficient to estimate the contribution of copyright industries. The NBS publishes data on foreign trade in goods using two-digit CPA codes, whereas the NBM publishes data on foreign trade in services at a highly aggregated level. Therefore, NBS experts disaggregated the data on foreign trade in goods and services at the necessary levels in order to estimate the contribution made by copyright industries.

All the data estimated for this report are consistent at two- and four-digit levels of disaggregation. Thus, the GVA and employment estimates at the level of four-digit NACE codes are equivalent to the data at the two-digit level. The same holds true for foreign trade in goods, based on the CPA classification. The disaggregated data on foreign trade in services are also consistent with the aggregated data.

### Gross value added data

Gross value added (GVA) was calculated for the purpose of this project by NBS experts using four-digit NACE codes (rev. 1.1). The resulting estimates are consistent with the 2013 revision of the national accounts.

The dataset consists of GVA estimates for copyright activities at the level of four-digit NACE codes, which were aggregated at the level of copyright industries. The data are provided in Moldovan lei for 2008-2013.

The data have been verified and checked for internal consistency (based on the statistical questionnaire conducted by the NBS) and temporal consistency (based on previous years). Furthermore, the data for each firm are compared to the data obtained from other similar firms, as well as to the data obtained from other statistical and administrative sources. When necessary, inconsistent data were adjusted and missing data were estimated by the NBS.

Gross value added has been adjusted to the estimates for the informal economy produced by the NBS. The computations have been performed for economic activities and sectors (i.e. formal, informal, households' production for own consumption, except for illegal activities, which are not estimated).

### *Employment data*

In order to account for informal employment, we use the employment data reported by the population through the Labor Force Survey (LFS). For the purposes of this report, we use data from the LFS at the level of four-digit NACE codes, in full-time equivalents. This is possible because the LFS is compiled using four-digit NACE codes, which are consistent with the national accounts.

### *Data on foreign trade in goods and services*

Based on data obtained from the Customs Service, NBS experts aggregated data to the eight-digit level and constructed a correspondence table comparing the eight-digit codes and the four-digit CPA<sup>29</sup> code. The transfer to four-digit CPA codes was performed using Eurostat passkeys, which are specific to every year. These estimations were conducted by NBS experts for the purpose of this report.

The data on **trade in services** are based on the balance of payments compiled by the National Bank of Moldova and are consistent with the fifth revision of the IMF Balance of Payments Manual.

**Table 42: Classification of copyright services**

Balance of Payment Indicators	Code
Computer and information services	b.7
Computer services	b.7.1
Information services	b.7.2
News agencies services*	b.7.2.1
Other information services	b.7.2.2
Royalties and license fees	b.8
Franchises and similar services*	b.8.1
Other payments for copyrights and licenses	b.8.2
Personal, cultural and recreational services	b.10
Audio-visual and related services	b.10.1

\* no foreign trade activities

### **Economic contribution of copyright industries based on additional indicators**

The data computed by NBS offer additional opportunities to estimate the contribution of copyright industries to economic growth.

Besides GVA, employment and foreign trade, we estimated the following indicators:

- Efficiency of copyright firms, based on **labor productivity** estimations. This was calculated based on the ratio between GVA and the number of employees (in FTE), on a four-digit level.
- Proxy for competitive advantages and disadvantages, based on the trade balance for copyright goods and services. This might have major policy implications as it reveals the most attractive industries for investments.

<sup>29</sup> Statistical Classification of Products by Activity in the European Economic Community, 2002 version.

## Annex B Statistics

**Table 43: Gross value added of CI, million lei**

Category	Subcategory	2008	2009	2010	2011	2012	2013
1. Core	1. Press and literature	325.55	339.04	398.84	401.80	402.54	388.62
	2. Music, theatrical productions, operas	30.55	47.33	33.23	24.36	37.71	37.13
	3. motion picture and video	52.06	91.69	94.24	118.95	151.49	160.66
	4. Radio and television	193.00	172.02	159.79	208.58	237.18	214.95
	5. Photography	10.58	7.17	7.75	4.38	3.97	3.22
	6. Software and databases	450.58	483.40	606.75	674.03	841.58	1034.18
	7. Visual and graphic arts	34.12	29.03	35.94	35.77	39.89	42.72
	8. Advertising services	214.53	151.92	191.66	185.67	312.11	337.39
	9. Copyright collecting societies	5.99	4.90	7.27	7.10	6.80	6.12
<b>1. Core total</b>		<b>1316.95</b>	<b>1326.50</b>	<b>1535.46</b>	<b>1660.63</b>	<b>2033.27</b>	<b>2224.97</b>
2. Interdependent	1. TV sets, radios, VCRs, [...], and other similar equipment	138.88	105.42	122.45	108.07	134.25	154.58
	2. Computers and equipment	91.38	72.36	87.25	122.65	76.04	123.14
	3. Musical Instruments	1.84	1.28	2.00	2.14	2.20	2.58
	4. Photocopiers	0.41	0.19	0.93	0.21	0.22	0.00
	5. Photographic and Cinematographic Instruments	0.06	0.00	0.37	0.00	0.00	0.00
	7. Paper	44.86	49.18	67.50	79.64	90.13	140.51
<b>2. Interdependent total</b>		<b>277.42</b>	<b>228.44</b>	<b>280.50</b>	<b>312.71</b>	<b>302.85</b>	<b>420.80</b>
3. Partial	1. Apparel, textiles and footwear	7.43	7.34	8.75	10.29	10.37	11.91
	2. Jewelry and coins	2.62	2.95	2.02	2.78	2.25	2.53
	3. Other crafts	0.27	1.11	0.97	0.85	0.60	0.37
	4. Furniture	11.05	12.26	13.79	14.54	15.63	19.37
	5. Household goods, china and glass	70.24	69.65	71.98	74.50	74.76	96.56
	6. Wall coverings and carpets	7.98	7.38	7.08	1.89	7.79	7.58
	7. Toys and games	5.94	7.36	7.22	7.08	10.77	9.35
	8. Architecture, engineering, surveying	42.92	37.49	43.06	35.85	34.57	37.58
	9. Interior design	0.47	0.38	0.57	0.55	0.53	0.48
	10. Museums	0.23	0.19	0.22	0.23	0.28	0.35
<b>3. Partial total</b>		<b>149.13</b>	<b>146.11</b>	<b>155.66</b>	<b>148.57</b>	<b>157.53</b>	<b>186.06</b>
4. Non-dedicated Support	1. General wholesale and retailing	109.18	101.02	107.45	126.29	141.33	159.61
	2. General transportation	130.63	110.74	120.16	130.00	151.80	173.38
	3. Telephony and internet	122.88	128.57	140.96	144.25	162.29	163.12
<b>4. Non-dedicated support total</b>		<b>362.69</b>	<b>340.33</b>	<b>368.57</b>	<b>400.54</b>	<b>455.42</b>	<b>496.12</b>
<b>Grand total copyright industries</b>		<b>2106.19</b>	<b>2041.38</b>	<b>2340.19</b>	<b>2522.45</b>	<b>2949.07</b>	<b>3327.95</b>

**Table 44: Gross value added of CI, per cent of total GVA**

Category	Subcategory	2008	2009	2010	2011	2012	2013
1. Core	1. Press and literature	0.63	0.67	0.67	0.59	0.55	0.46
	2. Music, theatrical productions, operas	0.06	0.09	0.06	0.04	0.05	0.04
	3. Motion picture and video	0.10	0.18	0.16	0.17	0.21	0.19
	4. Radio and television	0.37	0.34	0.27	0.30	0.32	0.26
	5. Photography	0.02	0.01	0.01	0.01	0.01	0.00
	6. Software and databases	0.87	0.95	1.01	0.99	1.14	1.24
	7. Visual and graphic arts	0.07	0.06	0.06	0.05	0.05	0.05
	8. Advertising services	0.41	0.30	0.32	0.27	0.42	0.40
	9. Copyright collecting societies	0.01	0.01	0.01	0.01	0.01	0.01
<b>1. Core total</b>		<b>2.54</b>	<b>2.61</b>	<b>2.56</b>	<b>2.43</b>	<b>2.76</b>	<b>2.66</b>
2. Interdependent	1. TV sets, radios, VCRs, [...], and other similar equipment	0.27	0.21	0.20	0.16	0.18	0.18
	2. Computers and equipment	0.18	0.14	0.15	0.18	0.10	0.15
	3. Musical instruments	0.00	0.00	0.00	0.00	0.00	0.00
	4. Photocopiers	0.00	0.00	0.00	0.00	0.00	0.00
	5. Photographic and Cinematographic Instruments	0.00	0.00	0.00	0.00	0.00	0.00
	7. Paper	0.09	0.10	0.11	0.12	0.12	0.17
<b>2. Interdependent Total</b>		<b>0.54</b>	<b>0.45</b>	<b>0.47</b>	<b>0.46</b>	<b>0.41</b>	<b>0.50</b>
3. Partial	1. Apparel, textiles and footwear	0.01	0.01	0.01	0.02	0.01	0.01
	2. Jewelry and coins	0.01	0.01	0.00	0.00	0.00	0.00
	3. Other crafts	0.00	0.00	0.00	0.00	0.00	0.00
	4. Furniture	0.02	0.02	0.02	0.02	0.02	0.02
	5. Household goods, china and glass	0.14	0.14	0.12	0.11	0.10	0.12
	6. Wall coverings and carpets	0.02	0.01	0.01	0.00	0.01	0.01
	7. Toys and games	0.01	0.01	0.01	0.01	0.01	0.01
	8. Architecture, engineering, surveying	0.08	0.07	0.07	0.05	0.05	0.04
	9. Interior design	0.00	0.00	0.00	0.00	0.00	0.00
	10. Museums	0.00	0.00	0.00	0.00	0.00	0.00
<b>3. Partial Total</b>		<b>0.29</b>	<b>0.29</b>	<b>0.26</b>	<b>0.22</b>	<b>0.21</b>	<b>0.22</b>
4. Non-dedicated Support	1. General wholesale and retailing	0.21	0.20	0.18	0.18	0.19	0.19
	2. General transportation	0.25	0.22	0.20	0.19	0.21	0.21
	3. Telephony and internet	0.24	0.25	0.24	0.21	0.22	0.19
<b>4. Non-dedicated support total</b>		<b>0.70</b>	<b>0.67</b>	<b>0.62</b>	<b>0.59</b>	<b>0.62</b>	<b>0.59</b>
<b>Grand Total copyright industries</b>		<b>4.07</b>	<b>4.02</b>	<b>3.91</b>	<b>3.69</b>	<b>4.00</b>	<b>3.98</b>



**Table 45: Gross value added of CI, per cent of total GDP**

Category	Subcategory	2008	2009	2010	2011	2012	2013
1. Core	1. Press and literature	0.52	0.56	0.55	0.49	0.46	0.39
	2. Music, theatrical productions, operas	0.05	0.08	0.05	0.03	0.04	0.04
	3. Motion picture and video	0.08	0.15	0.13	0.14	0.17	0.16
	4. Radio and television	0.31	0.28	0.22	0.25	0.27	0.21
	5. Photography	0.02	0.01	0.01	0.01	0.00	0.00
	6. Software and databases	0.72	0.80	0.84	0.82	0.95	1.03
	7. Visual and graphic arts	0.05	0.05	0.05	0.04	0.05	0.04
	8. Advertising services	0.34	0.25	0.27	0.23	0.35	0.34
	9. Copyright collecting societies	0.01	0.01	0.01	0.01	0.01	0.01
<b>1. Core total</b>		<b>2.09</b>	<b>2.20</b>	<b>2.14</b>	<b>2.02</b>	<b>2.30</b>	<b>2.21</b>
2. Interdependent	1. TV sets, Radios, VCRs, [...], and other similar equipment	0.22	0.17	0.17	0.13	0.15	0.15
	2. Computers and equipment	0.15	0.12	0.12	0.15	0.09	0.12
	3. Musical instruments	0.0029	0.0021	0.0028	0.0026	0.0025	0.0026
	4. Photocopiers	0.0006	0.0003	0.0013	0.0003	0.0003	0.0000
	5. Photographic and Cinematographic Instruments	0.0001	0.0000	0.0005	0.0000	0.0000	0.0000
	7. Paper	0.07	0.08	0.09	0.10	0.10	0.14
<b>2. Interdependent total</b>		<b>0.44</b>	<b>0.38</b>	<b>0.39</b>	<b>0.38</b>	<b>0.34</b>	<b>0.42</b>
3. Partial	1. Apparel, textiles and footwear	0.01	0.01	0.01	0.01	0.01	0.01
	2. Jewelry and coins	0.0042	0.0049	0.0028	0.0034	0.0025	0.0025
	3. Other crafts	0.0004	0.0018	0.0014	0.0010	0.0007	0.0004
	4. Furniture	0.02	0.02	0.02	0.02	0.02	0.02
	5. Household goods, china and glass	0.11	0.12	0.10	0.09	0.08	0.10
	6. Wall coverings and carpets	0.01	0.01	0.01	0.00	0.01	0.01
	7. Toys and games	0.01	0.01	0.01	0.01	0.01	0.01
	8. Architecture, engineering, surveying	0.07	0.06	0.06	0.04	0.04	0.04
	9. Interior design	0.0007	0.0006	0.0008	0.0007	0.0006	0.0005
	10. Museums	0.0004	0.0003	0.0003	0.0003	0.0003	0.0003
<b>3. Partial total</b>		<b>0.24</b>	<b>0.24</b>	<b>0.22</b>	<b>0.18</b>	<b>0.18</b>	<b>0.19</b>
4. Non-dedicated Support	1. General wholesale and retailing	0.17	0.17	0.15	0.15	0.16	0.16
	2. General transportation	0.21	0.18	0.17	0.16	0.17	0.17
	3. Telephony and Internet	0.20	0.21	0.20	0.18	0.18	0.16
<b>4. Non-dedicated support total</b>		<b>0.58</b>	<b>0.56</b>	<b>0.51</b>	<b>0.49</b>	<b>0.52</b>	<b>0.49</b>
<b>Grand total copyright industries</b>		<b>3.35</b>	<b>3.38</b>	<b>3.26</b>	<b>3.06</b>	<b>3.34</b>	<b>3.31</b>

**Table 46: Employment in CI, full time equivalents**

Category	Subcategory	2008	2009	2010	2011	2012	2013
1. Core	1. Press and literature	12.04	13.78	14.10	15.71	12.45	11.43
	2. Music, theatrical productions, operas	1.48	0.95	1.26	1.50	1.43	0.86
	3. Motion picture and video	1.01	1.03	1.51	1.46	1.04	0.97
	4. Radio and television	2.77	2.36	2.33	3.85	3.62	2.57
	5. Photography	1.09	1.15	0.70	0.66	1.29	1.05
	6. Software and databases	1.14	2.19	3.22	3.25	5.29	6.37
	7. Visual and graphic arts	0.87	0.97	0.83	0.91	1.09	0.84
	8. Advertising services	1.96	2.21	2.26	2.45	3.37	3.13
<b>1. Core total</b>		<b>22.36</b>	<b>24.63</b>	<b>26.21</b>	<b>29.79</b>	<b>29.58</b>	<b>27.21</b>
2. Interdependent	1. TV Sets, Radios, VCRs, [...], and other similar equipment	2.04	3.39	2.68	2.42	1.71	1.99
	2. Computers and equipment	0.61	0.25	0.67	0.41	0.49	0.84
	3. Musical instruments	0.09	0.24	0.15	0.12	0.08	0.10
	4. Photocopiers	0.03	0.00	0.00	0.00	0.20	0.13
	7. Paper	1.12	0.30	0.55	0.66	0.33	0.57
<b>2. Interdependent total</b>		<b>3.89</b>	<b>4.17</b>	<b>4.05</b>	<b>3.61</b>	<b>2.81</b>	<b>3.64</b>
3. Partial	1. Apparel, textiles and footwear	0.34	0.35	0.34	0.35	0.36	0.32
	2. Jewelry and coins	0.07	0.03	0.05	0.05	0.04	0.05
	3. Other crafts	0.04	0.03	0.03	0.02	0.07	0.03
	4. Furniture	0.41	0.40	0.48	0.51	0.48	0.38
	5. Household goods, china and glass	1.11	1.20	1.00	1.25	1.01	0.70
	6. Wall coverings and carpets	0.11	0.06	0.07	0.06	0.04	0.04
	7. Toys and GAMES	0.26	0.24	0.17	0.08	0.17	0.29
	8. Architecture, engineering, surveying	0.58	0.93	0.73	0.63	0.60	0.67
	9. Interior design	0.01	0.02	0.01	0.04	0.05	0.04
	10. Museums	0.01	0.01	0.01	0.01	0.01	0.01
<b>3. Partial total</b>		<b>2.94</b>	<b>3.28</b>	<b>2.90</b>	<b>3.01</b>	<b>2.83</b>	<b>2.51</b>
4. Non-dedicated Support	1. General wholesale and retailing	3.97	3.43	3.26	3.32	3.27	3.34
	2. General transportation	2.13	1.94	1.80	1.83	2.05	2.24
	3. Telephony and internet	0.44	0.42	0.39	0.39	0.43	0.34
<b>4. Non-dedicated support total</b>		<b>6.53</b>	<b>5.78</b>	<b>5.45</b>	<b>5.55</b>	<b>5.75</b>	<b>5.92</b>
<b>Grand total copyright industries</b>		<b>35.72</b>	<b>37.86</b>	<b>38.60</b>	<b>41.96</b>	<b>40.98</b>	<b>39.28</b>

**Table 47: Employment in CI, % of total employment**

Category	Subcategory	2008	2009	2010	2011	2012	2013
1. Core	1. Press and literature	1.02	1.24	1.32	1.39	1.15	1.04
	2. Music, theatrical productions, operas	0.13	0.09	0.12	0.13	0.13	0.08
	3. Motion picture and video	0.09	0.09	0.14	0.13	0.10	0.09
	4. Radio and television	0.23	0.21	0.22	0.34	0.33	0.23
	5. Photography	0.09	0.10	0.07	0.06	0.12	0.10
	6. Software and databases	0.10	0.20	0.30	0.29	0.49	0.58
	7. Visual and graphic arts	0.07	0.09	0.08	0.08	0.10	0.08
	8. Advertising services	0.17	0.20	0.21	0.22	0.31	0.29
<b>1. Core total</b>		<b>1.89</b>	<b>2.22</b>	<b>2.45</b>	<b>2.63</b>	<b>2.73</b>	<b>2.48</b>
2. Interdependent	1. TV sets, radios, VCRs, [...], and other similar equipment	0.17	0.30	0.25	0.21	0.16	0.18
	2. Computers and equipment	0.05	0.02	0.06	0.04	0.05	0.08
	3. Musical instruments	0.01	0.02	0.01	0.01	0.01	0.01
	4. Photocopiers	0.00	0.00	0.00	0.00	0.02	0.01
	7. Paper	0.09	0.03	0.05	0.06	0.03	0.05
<b>2. Interdependent total</b>		<b>0.33</b>	<b>0.38</b>	<b>0.38</b>	<b>0.32</b>	<b>0.26</b>	<b>0.33</b>
3. Partial	1. Apparel, textiles and footwear	0.03	0.03	0.03	0.03	0.03	0.03
	2. Jewelry and coins	0.01	0.00	0.01	0.00	0.00	0.00
	3. Other crafts	0.00	0.00	0.00	0.00	0.01	0.00
	4. Furniture	0.04	0.04	0.04	0.05	0.04	0.03
	5. Household goods, china and glass	0.09	0.11	0.09	0.11	0.09	0.06
	6. Wall coverings and carpets	0.01	0.01	0.01	0.01	0.00	0.00
	7. Toys and games	0.02	0.02	0.02	0.01	0.02	0.03
	8. Architecture, engineering, surveying	0.05	0.08	0.07	0.06	0.06	0.06
	9. Interior design	0.00	0.00	0.00	0.00	0.00	0.00
	10. Museums	0.00	0.00	0.00	0.00	0.00	0.00
<b>3. Partial total</b>		<b>0.25</b>	<b>0.29</b>	<b>0.27</b>	<b>0.27</b>	<b>0.26</b>	<b>0.23</b>
4. Non-dedicated Support	1. General wholesale and retailing	0.34	0.31	0.30	0.29	0.30	0.30
	2. General transportation	0.18	0.17	0.17	0.16	0.19	0.20
	3. Telephony and internet	0.04	0.04	0.04	0.03	0.04	0.03
<b>4. Non-dedicated support total</b>		<b>0.55</b>	<b>0.52</b>	<b>0.51</b>	<b>0.49</b>	<b>0.53</b>	<b>0.54</b>
<b>Grand total copyright industries</b>		<b>3.02</b>	<b>3.41</b>	<b>3.60</b>	<b>3.71</b>	<b>3.78</b>	<b>3.58</b>

**Table 48: Exports of CI goods, million lei**

Category	Subcategory	2008	2009	2010	2011	2012	2013	2014
1. Core	1. Press and literature	36.52	25.19	21.46	35.61	36.98	29.85	26.28
	2. Music, theatrical productions, operas	0.14	0.02	0.05	0.01	0.06	0.01	0.00
	3. Motion picture and video	0.34	0.06	0.16	0.02	0.14	0.03	0.00
	4. Radio and television	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5. Photography	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6. Software and databases	2.60	0.42	0.07	0.13	0.21	0.11	0.93
	7. Visual and graphic arts	0.02	0.00	0.01	0.00	0.01	0.00	0.00
	8. Advertising services	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>1. Core total</b>		<b>39.61</b>	<b>25.70</b>	<b>21.75</b>	<b>35.77</b>	<b>37.40</b>	<b>30.00</b>	<b>27.22</b>
2. Interdependent	1. TV sets, radios, VCRs, [...], and other similar equipment	5.09	1.67	0.94	16.36	12.36	4.30	2.78
	2. Computers and equipment	19.92	13.32	7.17	8.18	11.08	11.87	14.39
	3. Musical instruments	0.17	0.03	0.00	0.00	0.22	0.00	0.73
	4. Photocopiers	1.33	0.95	3.05	0.93	1.59	1.45	1.82
	5. Photographic and cinematographic instruments	4.40	4.78	3.53	4.29	4.46	5.72	7.02
	7. Paper	91.81	28.93	49.56	86.64	76.77	88.42	84.32
<b>2. Interdependent total</b>		<b>122.72</b>	<b>49.67</b>	<b>64.25</b>	<b>116.39</b>	<b>106.49</b>	<b>111.75</b>	<b>111.05</b>
3. Partial	1. Apparel, textiles and footwear	26.25	23.00	26.52	32.46	30.50	31.59	36.13
	2. Jewelry and coins	0.55	0.37	0.10	0.26	0.65	1.65	2.07
	3. Other crafts	1.72	1.01	1.27	3.59	2.40	2.28	2.78
	4. Furniture	15.54	9.26	9.86	15.00	16.46	16.17	12.98
	5. Household goods, china and glass	134.90	66.65	102.05	137.58	120.70	172.83	169.74
	6. Wall coverings and carpets	18.99	12.88	16.31	18.90	21.23	22.09	22.91
	7. Toys and games	20.94	40.17	43.87	33.80	49.11	33.46	14.91
	8. Architecture, engineering, surveying	0.00	0.00	0.00	0.01	0.00	0.00	0.00
	9. Interior design	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	10. Museums	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>3. Partial total</b>		<b>218.89</b>	<b>153.34</b>	<b>199.99</b>	<b>241.61</b>	<b>241.04</b>	<b>280.06</b>	<b>261.53</b>
<b>Grand total copyright industries</b>		<b>381.22</b>	<b>228.71</b>	<b>285.99</b>	<b>393.77</b>	<b>384.93</b>	<b>421.81</b>	<b>399.80</b>

**Table 49: Imports of CI goods, million lei**

Category	Subcategory	2008	2009	2010	2011	2012	2013	2014
1. Core	1. Press and literature	259.28	263.07	271.59	318.36	310.33	262.79	297.76
	2. Music, theatrical productions, operas	0.09	0.40	0.18	0.15	0.15	1.19	0.10
	3. Motion picture and video	0.25	1.52	0.35	0.33	0.33	2.83	0.18
	4. Radio and television	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5. Photography	0.01	0.00	0.01	0.00	0.13	0.00	0.00
	6. Software and databases	22.53	33.24	30.80	41.26	41.26	49.12	40.60
	7. Visual and graphic arts	0.01	0.05	0.01	0.02	0.02	0.16	0.01
	8. Advertising services	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>1. Core total</b>		<b>282.17</b>	<b>298.28</b>	<b>302.95</b>	<b>360.13</b>	<b>352.23</b>	<b>316.10</b>	<b>338.64</b>
2. Interdependent	1. TV Sets, radios, VCRs, [...], and other similar equipment	207.24	173.29	305.11	399.70	399.70	415.40	468.27
	2. Computers and equipment	352.98	204.59	354.68	476.30	476.30	525.97	575.43
	3. Musical instruments	3.39	1.77	3.75	2.75	2.75	4.53	5.83
	4. Photocopiers	96.67	62.05	91.12	121.69	121.64	110.10	130.12
	5. Photographic and cinematographic instruments	39.70	41.61	43.64	59.34	59.34	104.71	96.52
	7. Paper	695.67	497.04	731.31	808.27	775.38	826.63	942.53
	<b>2. Interdependent total</b>		<b>1395.66</b>	<b>980.35</b>	<b>1529.61</b>	<b>1868.04</b>	<b>1835.10</b>	<b>1987.35</b>
3. Partial	1. Apparel, textiles and footwear	13.04	12.93	14.82	18.73	19.27	21.35	21.90
	2. Jewelry and coins	27.27	22.44	18.24	26.43	26.43	29.07	31.53
	3. Other crafts	87.58	75.61	93.74	114.81	115.87	140.00	151.60
	4. Furniture	31.71	20.38	25.38	30.64	30.64	29.74	28.33
	5. Household goods, china and glass	242.38	143.77	196.53	249.40	250.73	303.83	310.47
	6. Wall coverings and carpets	11.00	10.98	13.44	14.26	14.54	16.55	15.78
	7. Toys and games	43.25	69.61	68.81	92.58	92.58	79.00	77.35
	8. Architecture, engineering, surveying	0.03	0.01	0.01	0.06	0.01	0.02	0.07
	9. Interior design	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	10. Museums	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>3. Partial total</b>		<b>456.25</b>	<b>355.73</b>	<b>430.97</b>	<b>546.91</b>	<b>550.09</b>	<b>619.56</b>	<b>637.04</b>
<b>Grand total copyright industries</b>		<b>2134.07</b>	<b>1634.36</b>	<b>2263.54</b>	<b>2775.08</b>	<b>2737.42</b>	<b>2923.01</b>	<b>3194.39</b>

**Table 50: Exports of CI goods, % of total exports of goods**

Category	Subcategory	2008	2009	2010	2011	2012	2013	2014
1. Core	1. Press and literature	0.21	0.17	0.11	0.13	0.14	0.10	0.08
	2. Music, theatrical productions, operas	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3. Motion picture and video	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4. Radio and television	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5. Photography	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6. Software and databases	0.02	0.00	0.00	0.00	0.00	0.00	0.00
	7. Visual and graphic arts	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	8. Advertising services	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>1. Core total</b>		<b>0.23</b>	<b>0.17</b>	<b>0.11</b>	<b>0.13</b>	<b>0.14</b>	<b>0.10</b>	<b>0.08</b>
2. Interdependent	1. TV Sets, Radios, VCRs, [...], and other similar equipment	0.03	0.01	0.00	0.06	0.05	0.01	0.01
	2. Computers and equipment	0.12	0.09	0.04	0.03	0.04	0.04	0.04
	3. Musical instruments	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4. Photocopiers	0.01	0.01	0.02	0.00	0.01	0.00	0.01
	5. Photographic and cinematographic instruments	0.03	0.03	0.02	0.02	0.02	0.02	0.02
	7. Paper	0.54	0.20	0.25	0.32	0.28	0.28	0.25
<b>2. Interdependent total</b>		<b>0.72</b>	<b>0.33</b>	<b>0.33</b>	<b>0.44</b>	<b>0.39</b>	<b>0.36</b>	<b>0.34</b>
3. Partial	1. Apparel, textiles and footwear	0.15	0.16	0.14	0.12	0.11	0.10	0.11
	2. Jewelry and coins	0.00	0.00	0.00	0.00	0.00	0.01	0.01
	3. Other crafts	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	4. Furniture	0.09	0.06	0.05	0.06	0.06	0.05	0.04
	5. Household goods, china and glass	0.79	0.45	0.52	0.52	0.45	0.56	0.51
	6. Wall coverings and carpets	0.11	0.09	0.08	0.07	0.08	0.07	0.07
	7. Toys and games	0.12	0.27	0.22	0.13	0.18	0.11	0.05
	8. Architecture, engineering, surveying	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	9. Interior design	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	10. Museums	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>3. Partial total</b>		<b>1.29</b>	<b>1.03</b>	<b>1.02</b>	<b>0.90</b>	<b>0.89</b>	<b>0.90</b>	<b>0.79</b>
<b>Grand total copyright industries</b>		<b>2.24</b>	<b>1.54</b>	<b>1.46</b>	<b>1.47</b>	<b>1.43</b>	<b>1.36</b>	<b>1.21</b>

**Table 51: Imports of CI goods, % of total imports of goods**

Category	Subcategory	2008	2009	2010	2011	2012	2013	2014
1. Core	1. Press and literature	0.51	0.72	0.58	0.53	0.50	0.38	0.40
	2. Music, theatrical productions, operas	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3. Motion picture and video	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4. Radio and Television	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5. Photography	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6. Software and databases	0.04	0.09	0.07	0.07	0.07	0.07	0.05
	7. Visual and graphic arts	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	8. Advertising services	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>1. Core total</b>		<b>0.56</b>	<b>0.82</b>	<b>0.65</b>	<b>0.60</b>	<b>0.56</b>	<b>0.46</b>	<b>0.46</b>
2. Interdependent	1. TV sets, Radios, VCRs, [...], and other similar equipment	0.41	0.48	0.65	0.66	0.64	0.60	0.63
	2. Computers and Equipment	0.70	0.56	0.76	0.79	0.76	0.77	0.78
	3. Musical instruments	0.01	0.00	0.01	0.00	0.00	0.01	0.01
	4. Photocopiers	0.19	0.17	0.19	0.20	0.19	0.16	0.18
	5. Photographic and cinematographic instruments	0.08	0.11	0.09	0.10	0.10	0.15	0.13
	7. Paper	1.38	1.36	1.56	1.34	1.24	1.20	1.28
<b>2. Interdependent total</b>		<b>2.77</b>	<b>2.69</b>	<b>3.26</b>	<b>3.10</b>	<b>2.94</b>	<b>2.89</b>	<b>3.00</b>
3. Partial	1. Apparel, textiles and footwear	0.03	0.04	0.03	0.03	0.03	0.03	0.03
	2. Jewelry and coins	0.05	0.06	0.04	0.04	0.04	0.04	0.04
	3. Other crafts	0.17	0.21	0.20	0.19	0.19	0.20	0.21
	4. Furniture	0.06	0.06	0.05	0.05	0.05	0.04	0.04
	5. Household goods, china and glass	0.48	0.39	0.42	0.41	0.40	0.44	0.42
	6. Wall coverings and carpets	0.02	0.03	0.03	0.02	0.02	0.02	0.02
	7. Toys and games	0.09	0.19	0.15	0.15	0.15	0.11	0.10
	8. Architecture, engineering, surveying	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	9. Interior design	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	10. Museums	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>3. Partial total</b>		<b>0.91</b>	<b>0.98</b>	<b>0.92</b>	<b>0.91</b>	<b>0.88</b>	<b>0.90</b>	<b>0.86</b>
<b>Grand total copyright industries</b>		<b>4.24</b>	<b>4.48</b>	<b>4.82</b>	<b>4.60</b>	<b>4.38</b>	<b>4.25</b>	<b>4.33</b>

**Table 52: Exports of CI services, million lei**

			2008	2009	2010	2011	2012	2013	2014
B	Services		296.83	354.85	443.83	596.65	720.07	848.08	1079.79
b.7	Computer and information services		272.93	330.62	412.91	561.50	676.35	788.85	1000.26
b.7.1	Computer services	1	214.14	259.40	323.96	440.54	530.65	618.92	825.20
b.7.2	Information services		58.79	71.22	88.95	120.95	145.69	169.93	175.06
b.7.2.1	News agencies services	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00
b.7.2.2	Other information services	1	58.79	71.22	88.95	120.95	145.69	169.93	175.06
b.8	Royalties and license fees		20.26	24.12	30.05	31.16	27.62	38.58	49.91
b.8.1	Franchises and similar services	0.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00
b.8.2	Other payments for copyrights and licenses	0.5	20.26	24.12	30.05	31.16	27.62	38.58	49.91
b.10	Personal, cultural and recreational services		3.64	0.11	0.87	3.99	16.11	20.64	29.62
b.10.1	Audio-visual and related services	1	3.64	0.11	0.87	3.99	16.11	20.64	29.62
b.10.2	Other personal, cultural and recreational services	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Table 53: Imports of CI services, million lei**

			2008	2009	2010	2011	2012	2013	2014
B	Services		296.83	354.85	443.83	596.65	720.07	848.08	1079.79
b.7	Computer and information services		272.93	330.62	412.91	561.50	676.35	788.85	1000.26
b.7.1	Computer services	1	214.14	259.40	323.96	440.54	530.65	618.92	825.20
b.7.2	Information services		58.79	71.22	88.95	120.95	145.69	169.93	175.06
b.7.2.1	News agencies services	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00
b.7.2.2	Other information services	1	58.79	71.22	88.95	120.95	145.69	169.93	175.06
b.8	Royalties and license fees		20.26	24.12	30.05	31.16	27.62	38.58	49.91
b.8.1	Franchises and similar services	0.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00
b.8.2	Other payments for copyrights and licenses	0.5	20.26	24.12	30.05	31.16	27.62	38.58	49.91
b.10	Personal, cultural and recreational services		3.64	0.11	0.87	3.99	16.11	20.64	29.62
b.10.1	Audio-visual and related services	1	3.64	0.11	0.87	3.99	16.11	20.64	29.62
b.10.2	Other personal, cultural and recreational services	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00



**Table 54: Exports of CI services, % of total exports of services**

			2008	2009	2010	2011	2012	2013	2014
B	Services		3.66	5.09	5.48	6.08	6.58	7.12	8.16
b.7	Computer and information services		3.15	4.44	4.77	5.44	5.95	6.33	7.23
b.7.1	Computer services	1	2.47	3.48	3.75	4.27	4.67	4.97	5.96
b.7.2	Information services		0.68	0.96	1.03	1.17	1.28	1.36	1.26
b.7.2.1	News agencies services	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00
b.7.2.2	Other information services	1	0.68	0.96	1.03	1.17	1.28	1.36	1.26
b.8	Royalties and license fees		0.47	0.65	0.69	0.60	0.49	0.62	0.72
b.8.1	Franchises and similar services	0.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00
b.8.2	Other payments for copyrights and licenses	0.5	0.47	0.65	0.69	0.60	0.49	0.62	0.72
b.10	Personal, cultural and recreational services		0.04	0.00	0.01	0.04	0.14	0.17	0.21
b.10.1	Audio-visual and related services	1	0.04	0.00	0.01	0.04	0.14	0.17	0.21
b.10.2	Other personal, cultural and recreational services	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Table 55: Imports of CI services, per cent of total imports of services**

			2008	2009	2010	2011	2012	2013	2014
B	Services		3.87	4.98	4.87	4.63	5.99	6.86	6.66
b.7	Computer and information services		1.95	3.36	3.07	2.60	3.88	4.23	4.22
b.7.1	Computer services	1	1.70	2.93	2.68	2.27	3.38	3.69	3.71
b.7.2	Information services		0.25	0.43	0.39	0.33	0.49	0.54	0.51
b.7.2.1	News agencies services	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00
b.7.2.2	Other information services	1	0.25	0.43	0.39	0.33	0.49	0.54	0.51
b.8	Royalties and license fees		1.82	1.49	1.65	1.88	1.95	2.34	2.19
b.8.1	Franchises and similar services	0.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00
b.8.2	Other payments for copyrights and licenses	0.5	1.82	1.49	1.65	1.88	1.95	2.34	2.19
b.10	Personal, cultural and recreational services		0.11	0.13	0.14	0.15	0.16	0.29	0.26
b.10.1	Audio-visual and related services	1	0.11	0.13	0.14	0.15	0.16	0.29	0.26
b.10.2	Other personal, cultural and recreational services	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## Annex C Copyright Factors of Apparel, Textiles and Footwear Products

Product	Copyright factor
Printing knitted fabrics and nonwovens	1%
Cotton bed linen (excluding knitted)	1%
Table linen of cotton (excluding knitted)	1%
Table linen, woven, of other textile materials	1%
Embroidery of other textile materials, in pieces, ribbons and motifs	1%
Other knitted	0.5%
Jerseys, pullovers, cardigans, waistcoats and similar articles of wool or fine hair, knitted, for men and boys	1%
Jerseys, pullovers, cardigans, waistcoats and similar articles of wool or fine hair, knitted, for women and girls	1%
Lightweight fine knit cotton	0.5%
Jerseys, pullovers, cardigans, waistcoats and similar articles of cotton, knitted, for men and boys	1%
Jerseys, pullovers, cardigans, waistcoats and similar articles of cotton, knitted, for women and girls	1%
Jerseys, pullovers, cardigans, waistcoats and similar articles of synthetic fibers, artificial knitted, for women and girls	1%
Jerseys, pullovers, cardigans, waistcoats and similar articles, knitted other textile materials	1%
Industrial services for making sweaters, jerseys, jackets, waistcoats and similar articles, knitted or crocheted	1%
Leather coats	0.5%
Jackets and blazers, leather	0.5%
Panels, of cotton, for men or boys	0.5%
Panels work of fibers, for men or boys	0.5%
Jackets, of cotton, for men or boys,	0.5%
Working jackets from fibers, for men or boys	0.5%
Long pants and shorts, of cotton, for men or boys	0.5%
Long trousers and breeches, of man-made fibers, for men or boys	0.5%
Panels, of cotton, for women or girls	0.5%
Panels work of fibers, for women or girls	0.5%
Jackets, of cotton, for women or girls	1%
Working jackets, from fibers for women or girls	1%
Long pants and shorts, of cotton, for women or girls	0.5%
Long trousers and breeches, of man-made fibers	0.5%
Other clothing from cotton, man-made fibers, for men or boys	0.5%
Costumes, clothing sets and panels, knitted, for men or boys	1%
Long pants and shorts, aprons, bib and brace overalls, knitted, for men or boys	1%
Other knitted garments for men or boys	1%
Coats, parkas, capes and similar articles, knitted, for women or girls	1%
Hoodies, jackets and similar articles, knitted, for women or girls	1%
Knitted jackets for women or girls, pcs.	1%
Costumes and sets clothing, knitted, for women or girls	1%
Knitted dresses for women and girls	1%

Skirts and divided skirts, knitted, for women or girls	1%
Long pants and shorts, aprons, bib and brace overalls, knitted, for women or girls	1%
Other knitted garments for women or girls	1%
Raincoats, cotton, for men or boys	0.5%
Coats, parkas, capes and similar articles of wool or fine hair, for men or boys	0.5%
Waterproof fibers, for men or boys	0.5%
Coats, parkas, capes and similar articles of other textile materials, for men or boys	0.5%
Hoodies, jackets and similar articles of cotton (excl. knitted), for men or boys	0.5%
Hoodies, jackets and similar synthetic or man-made fibers (excl. knitted), for men or boys	0.5%
Hoodies, jackets and similar articles of textile materials (excl. knitted), for men or boys	0.5%
Panels suits and cotton (excl. knitted), for men or boys	0.5%
Costume and panels, wool and fine hair (excl. knitted), for men or boys	0.5%
Costume and panels, of other textile materials (excl. knitted), for men or boys, pcs.	0.5%
Clothing sets, cotton (excl. knitted and work), for men or boys	0.5%
Jackets cotton (excl. knitted and work), for men or boys, pcs.	0.5%
Wool or fine hair jackets (excl. knitted), for men or boys	0.5%
Coats of other textile materials (excl. knitted and work), for men or boys	0.5%
Trousers and breeches of cotton (excl. knitted and work), for men or boys	0.5%
Long pants and short hair wool or fine (excl. knit and work), for men or boys	0.5%
Long pants and shorts made fibers (excl. knitted and work), for men or boys	0.5%
Waterproof cotton (excluding knitted) for women or girls	0.5%
Coats, parkas, capes and similar articles, of wool or fine hair (excluding knitted) for women or girls	0.5%
Raincoats, etc., artificial or synthetic fibers (excluding knitted) for women or girls	0.5%
Coats, parkas, capes and similar articles of other textile materials for women or girls	0.5%
Hoodies, jackets and similar synthetic or man-made fibers (excl. knitted) for women or girls	0.5%
Hoodies, jackets and similar articles of textile materials (excl. knitted) for women or girls	0.5%
Hoodies, jackets and similar articles of textile materials (excl. knitted) for women or girls	0.5%
Costume cotton (excl. knitted) for women or girls	1%
Costume wool or fine hair (excl. knitted) for women or girls	1%
Costumes from other textile materials (excl. knitted) for women or girls	1%
Jackets and blazers of cotton (excl. For work or knitted) for women or girls	0.5%
Jackets and blazers of wool or fine hair (excl. knitted) for women or girls	0.5%
Sarafan dresses and cotton (excl. knitted) for women or girls	1%
Wool dresses and sarafan (excl. knitted) for women or girls	1%
Dresses and sarafans of fibers (excl. knitted) for women or girls	1%
Dresses and sarafans of silk (excl. knitted) for women or girls	1%
Sarafan dresses and other textile materials (excl. knitted) for women or girls	1%
Skirts and divided skirts of cotton (excl. knitted) for women or girls	1%
Skirts and divided skirts, wool (excl. knitted) for women or girls	1%
Skirts and divided skirts of fibers (excl. knitted) for women or girls	1%
Skirts and divided skirts of other textile materials (excl. knitted) for women or girls	1%
Trousers and breeches of cotton (excl. knitted and work) for women or girls	1%
Wool trousers and breeches (excl. knitted) for women or girls	1%
Trousers and breeches of synthetic fibers (excl. knitted) for women or girls	1%

Sarafan dresses and cotton (excl. knitted) for women or girls	1%
Wool dresses and sarafan (excl. knitted) for women or girls	1%
Dresses and sarafan of fibers (excl. knitted) for women or girls	1%
Cotton shorts (excl. knitted) for women or girls	0.5%
Wool shorts (excl. knitted) for women or girls	0.5%
Aprons fibers (excl. knitted) for women or girls	0.5%
Industrial services for producing garments	0.5%
Shirts and blouses, knitted, for men or boys	1%
Panties and briefs, knitted, for men or boys	1%
Nightdresses and pajamas, knitted, for men or boys	1%
Knit shirts and blouses for women or girls	1%
Nightdresses and pajamas, knitted, for women or girls	1%
Chemises, petticoats and slips, knitted, for women or girls	1%
Shirts and blouses, cotton (excl. knitted), for men or boys	1%
Nightdresses and pajamas, of cotton (excl. knitted), for men or boys	1%
Robes, vests and similar articles of cotton (excl. knitted), for men or boys	1%
Robes, vests and the like, of other textile materials (excl. knitted), for men or boys	1%
Shirts and blouses, cotton (excl. knitted) for women or girls	0.5%
Blouses and shirts, artificial or synthetic fibers (excl. knitted) for women or girls	0.5%
Blouses and shirts, silk or silk waste (excl. knitted) for women or girls	0.5%
Blouses and shirts, of other textile materials (excl. knitted) for women or girls	0.5%
Nightdresses and pajamas, of cotton (excl. knitted) for women or girls	1.0%
Shirts, shirts daily briefs of cotton (excl. knitted) for women or girls	1.0%
N negligees, bathrobes, vests, briefs and the like, of synthetic or artificial yarn (excl. knitted) for women or girls	0.5%
T-shirts and vests, knitted cotton	0.5%
T-shirts and vests, knitted materials	0.5%
Industrial services to produce items of underwear	0.5%
Clothing and clothing accessories for babies, knitted thousand	0.5%
Trainings for sport knitted pieces	1.0%
Clothing and clothing accessories for infants (excl. knitted)	0.5%
Jogging suits and other clothing for sport (excl. knitted), woolen, for women or girls	0.5%
Shawls, scarves, mufflers, mantillas, veils and the like, of silk (excl. knitted)	0.5%
Shawls, scarves, mufflers, mantillas, veils and the like, of other textile materials (excl. knitted), pcs.	0.5%
Ties, bow ties and cravats, of other textile materials (excl. knitted)	1.0%
Hats and other headgear, of other textile materials, knitted, hairnet	1.0%
Other hats and articles of other materials	1.0%
Waterproof footwear with uppers of rubber or plastics	0.5%
Boots, shoes with uppers of leather, men's pair.	0.5%
Boots, shoes with uppers of leather, women's pair.	0.5%
Boots, shoes with uppers of leather for children	0.5%
Sandals with uppers of leather, men's pair.	0.5%
Sandals with uppers of leather, women's pair.	0.5%
Sandals with uppers of leather, children	0.5%
Slippers and shoes inside, with uppers of textile materials	0.5%

Sports shoes with textile uppers and soles of rubber or plastics	0.5%
Other footwear not included in other categories	0.5%
Uppers and parts thereof	0.5%
Other parts of footwear (excl. girls) of other materials	0.5%
Industrial services for the production of footwear	0.5%

Source: Experts' estimations based on NBS data

## Annex D Copyright Factors of Furniture Products

Product	Copyright factor
Blankets, pillows, head filled with various materials (excluding mattresses and sleeping bags)	7.0%
Plane doors and their frames and thresholds abutting wooden pieces	2.0%
Other doors and their frames and thresholds abutting wooden piece.	3.0%
Works joinery and wooden construction parts	2.0%
Other Joinery and parts of wooden construction	3.0%
Prefabricated buildings of wood, thousand	3.0%
Wood marquetry or inlaid (wooden ornaments)	7.0%
Other articles of wood (hangers, bobbins, nails and the like)	4.0%
Glass mirrors, framed or not (excluding mirrors for vehicles)	6.0%
Doors and shutters of their staff and their thresholds, ferrous metal	7.0%
Staples in strips, of base metal	5.0%
Other articles of iron or steel	2.0%
Seating furniture with metal frame, other than those for offices	5.0%
Seating furniture with metal frame	5.0%
Sofa beds	6.0%
Couch	6.0%
Chairs	6.0%
Seats, other than for office	6.0%
Sofas	6.0%
Other furniture for sitting with wooden frame	7.0%
Seating furniture parts: wood	3.0%
Seating furniture parts: metal	3.0%
Seating furniture parts: n.e.c.	3.0%
Other metal office furniture, height more than 80 cm	3.0%
Office wooden desks, height no more than 80 cm	3.0%
Wooden tables of the kind used in offices, with height not more than 80 cm	3.0%
Floors and other wood office furniture, height no more than 80 cm	3.0%
Libraries, windows, shelves, counters and other wooden furniture production exposure, height more than 80 cm	5.0%
Other wooden office furniture, cabinets, racks with height more than 80 cm	3.0%
Other furniture wooden desk with height more than 80 cm	3.0%
Other wooden office furniture of a kind used in shops (except chairs)	3.0%
Kitchen benches	3.0%
Corner kitchen	3.0%
Buffets, kitchen cabinets	3.0%
Suspended kitchen cabinets	5.0%
Kitchen tables	5.0%
Wooden furniture or wooden and metal type used in the kitchen (gaskets)	5.0%
Other metal furniture (excluding those used in offices)	3.0%
Beds wooden	3.0%

Cabinet bedroom	5.0%
Toilets	5.0%
Cabinet bedding	5.0%
Furniture for bedrooms (gaskets)	5.0%
Other wooden furniture of a kind used in bedrooms (excluding seats, armchairs)	5.0%
Wooden furniture for dining rooms and living rooms (gaskets)	5.0%
Libraries	5.0%
Buffets, showcases	4.0%
Dressers	5.0%
Tables for dining	4.0%
Other wooden furniture for dining rooms and living rooms	4.0%
Wooden furniture of the kind used in bathrooms	7.0%
Other wooden furniture	4.0%
Furniture parts: metal	4.0%
Furniture parts: wooden	4.0%
Furniture parts of other materials	4.0%
Mattress	5.0%
Spring mattresses	3.0%

Source: Experts' estimations based on NBS data

## Annex E Copyright Factors of Selected Partial Copyright Activities

Corresponding NACE codes and activity names		Copyright factor
<b>Jewelry and coins</b>		
36.22	Manufacture of jewelry and related articles n.e.c.	0.25
36.61	Manufacture of imitation jewelry	0.25
<b>Other crafts</b>		
36.63	Other manufacturing n.e.c.	0.4
<b>Household goods, china and glass</b>		
20.51	Manufacture of other products of wood	0.3
20.52	Manufacture of articles of cork, straw and plaiting materials	0.4
26.12	Shaping and processing of flat glass	0.2
26.13	Manufacture of hollow glass	0.2
26.14	Manufacture of glass fibers	0.2
26.15	Manufacture and processing of other glass, including technical glassware	0.4
26.21	Manufacture of ceramic household and ornamental articles	0.2
26.24	Manufacture of other technical ceramic products	0.2
26.25	Manufacture of other ceramic products	0.2
28.75	Manufacture of other fabricated metal products n.e.c.	0.3
31.50	Manufacture of lighting equipment and electric lamps	0.4
52.44	Retail sale of furniture, lighting equipment and household articles n.e.c.	0.2
<b>Wall coverings and carpets</b>		
17.51	Manufacture of carpets and rugs	0.02
21.25	Manufacture of other articles of paper and paperboard n.e.c.	0.2
<b>Toys and games</b>		
36.50	Manufacture of games and toys	0.45
<b>Architecture, engineering, surveying</b>		
74.20	Architectural and engineering activities and related technical consultancy	0.15
<b>Interior design</b>		
74.87	Other business activities n.e.c.	0.05
<b>Museums</b>		
52.50	Retail sale of second-hand goods in stores	0.05
92.52	Museums activities and preservation of historical sites and buildings	0.05

Source: Experts' estimations based on the NBS data



For more information contact WIPO at [www.wipo.int](http://www.wipo.int)

**World Intellectual Property Organization**

34, chemin des Colombettes

P.O. Box 18

CH-1211 Geneva 20

Switzerland

Telephone:

41 22 338 91 11

Fax:

41 22 733 54 28