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The Economic Contribution of Copyright-Based Industries in Colombia



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Executive Summary

This research study, which was commissioned by the World Intellectual Property Organization (WIPO) and the National Copyright Directorate of Colombia, seeks to quantify the economic contribution of the copyright-based industries (CBI) to value added output (GDP), foreign trade (exports and imports) and employment in Colombia during the period 2000-2005.

1. Legal Framework

Copyright is the legal right granted to an author to distribute his work. The object of copyright is the work, which is defined as “any artistic, scientific or literary original creation, which can be disseminated or reproduced in any form.”

Likewise, there is a set of rights which protect certain activities. These are known as related rights. Although the activities protected are not literary, artistic or scientific creations, they have close links with the distribution of original works. These rights have been traditionally granted to performers, producers of phonograms and broadcasting companies.

2. Methodology

Based on the methodology proposed by WIPO, this study is focused on identifying the copyright-based industries and quantifying their contribution to value added output, employment and external trade. These industries include companies that contribute to the production and marketing of works protected by copyright at different points in the value chain.

The different categories of copyright-based industries are as follows:

- a. The core copyright industries: this group brings together all industries wholly dedicated to the creation, production, representation, exhibition, communication, distribution and sale of materials protected by copyright (i.e. music, literature, theatrical productions, film, communication media, visual arts, advertising services and collective copyright management).
- b. The interdependent industries: these are industries that contribute to the production, manufacture and sale of equipment. Their purpose is to facilitate the creation, production and use of material protected by copyright (manufacture and sale of appliances such as televisions, CD recorders and computers, musical instruments and photographic equipment, etc.).
- c. The partial copyright industries: these refer to certain activities that are related or linked to materials protected by copyright (such as jewelry, architecture, handicrafts, etc.).
- d. The non-dedicated support industries: this category relies indirectly and marginally on materials protected by copyright. Industries in this group dedicate their efforts equally to other activities not related to copyright (sales of telephone and transport equipment and other products).¹

Table 1. Summary of the Copyright-Based Industries according to the ISIC Classification

Core	Interdependent	Partial	Non-Dedicated Support	Total
25	13	25	35	98

Figures indicate number of four-digit items.

Source: This study.

¹The contribution of copyright to these industries has been calculated based on a specific factor (WIPO, 2005).

3. Results of the Study

3.1. Contribution of the CBI to the Value Added

Table 2 shows that the total value added of the copyright-based industries in Colombia reached Col\$9.5 millions of millions in 2005 (approximately 4,800 million US dollars) from Col\$5.7 millions of millions in 2000. As a percentage of GDP, the CBI represented an average of 3.3 per cent throughout the period.

In real terms, i.e. discounting price increases, the value added of the CBI grew 29 per cent in five years from Col\$2.4 millions of millions in 2000 to Col\$3.1 millions of millions in 2005 (at 1994 constant prices).

During the period analyzed, the CBI had an average participation in GDP of 3.3 per cent. This rate is similar to the share of electricity and gas, slightly higher than the contribution of crude oil and natural gas extraction and more than double that of coffee and coal. The latter comparison emphasizes the importance of the CBI in national output since coffee and coal are two important Colombian exports, which have a significant share in the global market.

The composition of the CBI is as follows: the core industries represent 56 per cent of the total value added generated by these economic activities, followed by interdependent (24 per cent), non-dedicated support (13 per cent) and partial copyright industries (8 per cent).

Table 2. Value Added of the CBI

	2000	2001	2002	2003	2004	2005
GDP Colombia	174,896	188,559	203,451	228,517	257,746	285,313
Total CBI	5,732	6,092	6,824	7,669	8,458	9,531
Core	3,077	3,345	3,760	4,215	4,656	5,330
Interdependent	1,524	1,576	1,731	1,982	2,148	2,260
Partial	440	484	532	572	668	727
Non-Dedicated Support	691	688	801	901	986	1,214
Thousand millions of Col\$ at 1994 prices						
GDP Colombia	74,364	75,458	76,917	79,884	83,772	87,728
Total CBI	2,417	2,427	2,582	2,675	2,798	3,053
Core	1,277	1,295	1,388	1,446	1,510	1,669
Interdependent	627	632	658	678	700	713
Partial	207	213	215	209	222	232
Non-Dedicated Support	307	287	321	342	366	439
CBI share in Colombia's GDP						
GDP Colombia	100	100	100	100	100	100
Total CBI	3.3	3.2	3.4	3.4	3.3	3.3
Core	1.8	1.8	1.8	1.8	1.8	1.9
Interdependent	0.9	0.8	0.9	0.9	0.8	0.8
Partial	0.3	0.3	0.3	0.3	0.3	0.3
Non-Dedicated Support	0.4	0.4	0.4	0.4	0.4	0.4

Source: This study.

3.2. Contribution to Employment

In 2006, the CBI generated 1,097,430 jobs, representing 5.8 per cent of the total national employment and 12.7 per cent of the total employment in the 13 major cities and their metropolitan areas, giving these industries a higher share in national employment than traditional sectors such as construction, finance and coffee.

Table 3. Employment of the CBI

	2003	2004	2005	2006
Total CBI	941,754	987,942	1,031,323	1,097,430
Core	270,850	289,573	301,299	321,846
Interdependent	123,521	128,684	132,471	140,606
Partial	306,544	318,997	332,873	352,426
Non-Dedicated Support	240,839	250,688	264,680	282,552
CBI share in Colombian employment	5.5	5.8	5.8	5.8
Core	1.6	1.7	1.7	1.7
Interdependent	0.7	0.8	0.7	0.7
Partial	1.8	1.9	1.9	1.9
Non-Dedicated Support	1.4	1.5	1.5	1.5

Source: This study.

Breaking down the contribution of these industries for 2005, the core industries accounted for 1.7 per cent of total national employment, the interdependent industries 0.7 per cent, the partial copyright industries 1.9 per cent and the non-dedicated support industries 1.5 per cent.

Between 2003 and 2006, the copyright-based industries created around 156,000 additional jobs, representing 8.8 per cent of the total new jobs in the country, and 16.5 per cent of those created in the 13 major cities and their metropolitan areas. These new jobs in the CBI represent a cumulative growth rate of 16.5 per cent, 6.2 points higher than the cumulative national growth of 10.3 per cent and 4.3 points above the 12.2 per cent rate for the 13 major cities and their metropolitan areas.

3.3. Contribution to Foreign Trade

In 2005, the CBI had a trade deficit since their imports of 4,800 million US dollars were more than double their exports of 2,138 million US dollars. While CBI exports represented 16.7 per cent of the industrial exports and 10.1 per cent of total exports, imports had a more substantial share at 24 per cent of industrial imports and 22.6 per cent of total imports.

The CBI trade deficit of 2,200 million US dollars indicates that the country is a net importer of CBI goods and services. However, this initial result is mainly determined by imports of the interdependent industries. If only the core industries' export and import transactions were taken into account, the trade balance would be reversed, that is, the country would be a net exporter of CBI goods and services. The following table shows the CBI foreign trade by category.

Table 4. Exports and Imports of the CBI, 2000-2005

		Exports (FOB)					
		2000	2001	2002	2003	2004	2005
Core		172.4	212.6	189.7	188.1	218.8	232.8
Interdependent		226.6	282.9	283.5	327.6	392.8	433.5
Partial		903.6	987.0	950.1	1,033.4	1,377.4	1,471.5
Non-Dedicated Support		0.0	0.0	0.0	0.0	0.0	0.0
Total CBI		1,302.7	1,482.4	1,423.2	1,549.1	1,989.0	2,137.8

Total National		2000	2001	2002	2003	2004	2005
Total Exports		13,158	12,330	11,975	13,129	16,788	21,190
Industrial Sector		7,073	7,397	7,200	7,979	10,469	12,778
Participation of CBI in Total Exports (%)							
Total Exports		9.9	12.0	11.9	11.8	11.8	10.1
Industrial Sector		18.4	20.0	19.8	19.4	19.0	16.7

		Imports (CIF)					
		2000	2001	2002	2003	2004	2005
Core		117.1	178.9	106.7	102.4	109.4	131.2
Interdependent		1,844.0	1,962.7	2,032.7	2,330.1	2,641.9	3,804.7
Partial		597.1	621.6	611.4	591.1	733.9	864.5
Non-Dedicated Support		0.0	0.0	0.0	0.0	0.0	0.0
Total CBI		2,558.2	2,763.3	2,750.9	3,023.7	3,485.1	4,800.4

Total National		2000	2001	2002	2003	2004	2005
Total Imports		11,757	12,821	12,695	13,882	16,764	21,204
Industrial Sector		10,856	11,827	11,704	12,826	15,549	19,965
Participation of CBI in Total Imports (%)							
Total Imports		21.8	21.6	21.7	21.8	20.8	22.6
Industrial Sector		23.6	23.4	23.5	23.6	22.4	24.0

Source: This study, based on trade figures from Colombia's National Statistics Department.

3.4. Conclusions

This study has been designed to measure the economic dimension of the copyright-based industries in aggregate terms and at a macro level in Colombia. This research has shown that the role of copyright and related rights can be examined, like other rights, in economic terms.

Likewise, it has demonstrated that within the cultural heritage framework, these industries constitute a potential source of economic growth and development.

- The CBI make an important economic contribution. In 2005, the CBI contributed 3.3 per cent of GDP; generated 1,031,323 jobs or 5.8 per cent of total national employment and exported 2,138 million US dollars.
- These industries exhibited higher levels of growth compared with other traditional sectors of the Colombian economy.

The quantitative analysis done in this study showed that these industries: i) mobilize huge resources, generate wealth, employment and foreign exchange; ii) have close economic, industrial and technological ties with other sectors of the economy; iii) occupy an important place among the best performing sectors; iv) present greater economic value compared with many industries engaged in the production of traditional goods and services.

In a globalized world, and with the opportunities offered by the new economy based on information and communication technology (ICT), competitive advantages of countries are no longer based so much on their natural resources and the production of non-tradable goods, but on the introduction of technological and organizational innovations and strategic information (elements of knowledge).

The CBI include dynamic sectors associated with the ICT, which will not only open new fields of application for copyright and related rights but will also generate new investment to further raise the participation of the CBI in the economy in the immediate future.

The purpose of quantifying the economic contribution of the CBI to value added, national employment and foreign exchange income is to make these industries “visible” to the public and to potential investors and financiers (the public sector, firms and private investors).

From the public policy point of view, this study is designed to guide specific measures to promote the consolidation and expansion of the copyright industries. In other words, this study is geared towards the implementation of policies which will influence the allocation of resources to generate production capacity at national and local levels; the training of human resources through the promotion of vocational and technical training; the generation of information systems and the dissemination and appropriation of technologies.

Introduction

The creation, production and marketing of intangible creative products serve as channels to transmit the country's cultural identity. Likewise, because of their significant contribution to economic growth and employment generation, they are analyzed with a view to creating specific policies to promote their development.

The new perception and growing recognition of the potential of the creative industries which, according to Kamil Idris (2000) "constitute the heart of industries protected by copyright", are based on the new economic framework supported by knowledge, information and the opening of markets. These components of the global economy, coupled with the significant monetary value of the CBI, which in many cases surpasses the value of goods and services produced in the traditional sectors, also explain the huge demand for information on the importance or weight of these industries in the national economic aggregates.

Likewise, the dynamism of the products of the new economy (qualitative changes, new products, new forms of production, consumption, etc.) has also influenced legislation on copyright to a great extent.

In view of these developments, this study will identify the economic relations between the CBI and other sectors of the economy, especially services, which directly or indirectly depend on the CBI, and will quantify their contribution to the Colombian economy:²

- *To emphasize the positive effects of CBI on the Colombian economy to encourage policy makers to incorporate the right policies concerning this sector.*
- *To demonstrate with convincing statistical evidence the competitive advantages of the country's creative sector.*

Although, it is clear that the granting of legal rights to an author concerning the distribution of his work and the effective protection of these rights are fundamental mechanisms to encourage creation and innovation activities and to promote investment, it is still necessary for the government to play an active role in formulating policies to promote these industries to ensure that they will contribute robustly to the country's economic growth.

The basis of this research was the statistical information system developed, among others, by the National Statistics Department (DANE), the National Tax and Customs Directorate (DIAN) and the Central Bank. Likewise, the information provided by various CBI business and trade organizations mainly through the National Copyright Directorate was very useful.

The initiative for and the successful completion of this study were made possible thanks to the support of Dr. Fernando Zapata López, the director of the National Copyright Directorate in Colombia. Likewise, the valuable help and advice of Dr. Dimiter Gantchev of WIPO and Dr. Jose Luis Zofio, from the Universidad Autónoma de Madrid, made this undertaking possible and the authors would like to express their special appreciation to them. This same recognition is extended to our colleagues from the National Copyright Directorate and to CBI business and trade organizations.

² WIPO Magazine (May-June 2005), p.22.

1 Main Rules Governing the Copyright-Based Industries in Colombia.³

1.1 Copyright in Colombia

Copyright is the legal right granted to an author to distribute his work. The object of copyright is the work, which is defined as "any artistic, scientific or literary original creation, which can be disseminated or reproduced in any form". The concept of "literary and artistic property rights" had its origins in the French Revolution, and began to consolidate internationally during the first half of the nineteenth century. It was from that moment that most countries in the world started to create legislation to protect intellectual property.

Likewise, there is a set of rights which protect certain activities. These are known as related rights. Although the activities protected are not literary, artistic or scientific creations, they have close links with the distribution of original works. These rights have been traditionally granted to performers, producers of phonograms and broadcasting companies.

In Colombia, copyright and related rights are mainly regulated by Law 23 of 1982. Colombia has a Copyright Office, which is under the Ministry of Interior and Justice. The following summarizes the main provisions of this law:

Article 10 states that "the author of a work, unless proved otherwise, refers to the person whose name, pseudonym, initials, or any other mark or conventional signs (that are commonly known as equivalent to the same person) appear in print in the work and its reproductions or are articulated in the recitation, implementation, representation, interpretation or in any other form of public dissemination of such work."

1. Moral Rights

According to Article 30 the author has a perpetual right, inalienable and irrevocable to: i) divulge the work, that is, to make it known publicly; ii) claim authorship of the work at any time and in particular, to guarantee that his name or pseudonym appear when the work is published; iii) ensure that his work is not distorted, mutilated nor destroyed; iv) withdraw circulation or suspend any kind of use even though these were previously authorized.

2. Economic Rights

According to Article 12, the author has the right to perform any of the following acts: i) reproduce the work; ii) carry out a translation, adaptation, change or any other transformation of the work; iii) communicate the work to the public by representation, implementation, broadcasting or any other means.

As a general rule (Article 11), the economic value of an author's work lasts to the author's life plus 80 years. The rights of artists, interpreters and performers last their life plus 80 years.

3. Collective Management

In order to acknowledge the rights of authors, especially with respect to representation and performance, the law allows the creation of entities known as associations of authors and performers. In Colombia, these organizations are of a private nature and are non-profit with legal representation, established to defend the interests of owners of copyrights and related rights.⁴

³This chapter is based on the studies of A. Vega (2003) and M. Pachón (1988).

⁴The governing rules are articulated in Decision 351 of 1993, Law 44 of 1993.

4. Protected Works in Colombia.

Colombian law protects works published in Colombia for the first time either by Colombian or foreign authors, as well as works published abroad for the first time, provided that: i) the law of the country where the work is published protects works that are published for the first time in Colombia; ii) Colombia has signed an agreement with the respective country to protect works.

5. International Protection Agreements

Colombia has signed many international agreements that have encouraged the country to recognize protection levels that are not inferior to those established in international agreements.

Table 1. Major Agreements Signed by Colombia (Copyright)

Subject of Agreement	Country or Agency	Title of Agreement, Venue and Date of Signature	Entry into force
Copyright	UNESCO	Universal Copyright Convention and its Protocols I and II, revised in Paris on July 24, 1971 Geneva, September 6, 1952	June 18, 1976 Law 48 of 1975
Related Rights	WIPO	Rome Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations Rome, October 26, 1961	September 17, 1976 Law 48 of 1975
Copyright and Industrial Property	WIPO	Convention Establishing the World Intellectual Property Organization Stockholm, July 14, 1967	May 4, 1980 Law 46 of 1979
Copyright	WIPO	Berne Convention for the Protection of Literary and Artistic Works Berne, September 9, 1886	March 7, 1988 Law 33 of 1987
Copyright	WIPO	Film Register Treaty Geneva, April 18, 1989	May 9, 1994 Law 26 of 1992

Related Rights	WIPO	Geneva Convention for the Protection of Producers of Phonograms Against Unauthorized Duplication of Their Phonograms Geneva, October 29, 1971	May 16, 1994 Law 23 of 1992
Copyright	WIPO	WIPO Copyright Treaty (WCT) Geneva, December 20, 1996	November 29, 2000
Copyright and Related Rights	WIPO	WIPO Performances and Phonograms Treaty (WPPT) Geneva, December 20, 1996	November 29, 2000 Law 545 of 2000
Copyright		Agreement on Literary and Artistic Property Caracas, July 17, 1911.	July 28, 1914 Law 65 of 1913.
Copyright		Inter-American Copyright Agreement on Literary, Scientific and Artistic Works Washington, June 22, 1946.	January 4, 1972 Law 6 of 1970.
Copyright and Related Rights	Group of Three	Free Trade Agreement signed between Colombia, Mexico and Venezuela, the Group of Three, G-3 Cartagena de Indias, June 13, 1994	January 1, 1995 Law 172 of 1994
Copyright and Related Rights	World Trade Organization	Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement) Marrakech, April 15, 1994	December 16, 1994 Law 170 of 1994

Source: National Copyright Directorate of Colombia.

2 The Economic Importance of Intellectual Property

From an economic point of view, the main function of copyright is to provide incentives for intellectual output in a way that maximizes the difference between the value of the protected property and the social cost of its creation, including the cost of administration of the system. It is only through the effective protection of these rights that investments can flourish to promote the development of creative and innovative activities. The main mechanism to provide these incentives is to prohibit copying or the commercial use of a work without authorization or remuneration, by limiting access to the works or their enjoyment (Correa, 2000; Idris, 2000).

The economic importance of copyright and related rights increases in areas of major technological development and economic dynamism, such as information technology, mass media, technological research and development.⁵

2.1 The Importance of Measuring the Economic Dimension

The economic studies on intellectual property began in the mid-1950s. Most of these studies focused on industrial property and especially on patenting inventions. Copyright and related rights received relatively minor attention. Today, there is increasing interest in Latin American countries to quantify the economic contribution of intellectual property in GDP, employment and exports.

The function of copyright and related rights can be examined, like other rights, in economic terms.⁶ The importance of these rights is recognized due to the following factors:

- a. The copyright-based industries constitute a major economic phenomenon mobilizing huge resources, generating wealth, employment and foreign exchange for the country.
- b. The copyright industry complex has extensive economic, industrial and technological relations with other sectors of the economy, especially with the service sector, which directly or indirectly depends on the CBI level of activity.
- c. The great dynamism of products of the new economy (qualitative changes, new products, new forms of production and consumption) has had a big impact on copyright legislation, thus increasing the economic importance of the CBI.
- d. The economy has experienced structural transformation toward services, where knowledge and content have become the main factors for economic growth.
- e. The protection levels and exclusive rights granted by legislation guarantee the attraction of new investment in research and development of new technologies with market potential.
- f. The importance acquired by cultural products in the international trade of goods – and especially of services – has encouraged particular interest in the intellectual rights associated with their creation and production in international trade negotiations.

The foregoing shows why countries tend to have a greater interest nowadays in studying the phenomenon of the copyright industries, their importance, economic and social performance, structure, and market operation.⁷

⁵ It is clear to the authors that intellectual creation does not only cover economic aspects, which implies that it cannot be reduced to purely market considerations. It involves socio-cultural values that cannot be measured in purely monetary terms.

⁶ Correa, 2000.

⁷ A step in this direction has been the creation by DANE of the Satellite Cultural Account within the context of the National Accounts System.

2.2 Methodological Difficulties of the Study

In Colombia, the quantification of the contribution of these industries to the main economic aggregates presents conceptual and statistical difficulties, characteristic of other studies on the copyright-based industry sector (Bonet (2002); Márquez et al. (2006); García et al. (2008) and Siwek (2002)).

- a) The scope of protection is very wide because it includes literary or artistic creative expression. Likewise, international treaties leave open the possibility of copyright protection to include new modes of creation that can meet the characteristic features of the works covered, such as databases, video clips or software, etc.⁸
- b) The quantification of these industries is problematic. The intellectual output is the result of the creation of new ideas, but this creation by definition is immaterial and therefore its results are intangible.
- c) These industries are very dynamic and they experience constant and rapid change. In effect, the emergence of magnetic tape, copiers, video tape, VCRs, computers, computer software, databases, satellite broadcasts and cable distribution, the invention of digital technology and the advent of information super highways which combine digital technology and telecommunications, have given way to the development and consolidation of powerful industries of cultural goods (Vega, 2003). This dynamism, however, has also made the monitoring of these industries increasingly difficult, given that many activities are done through computer networks that go beyond administrative and legal borders. In addition, the entities responsible for producing statistics react slowly to the changes brought about by advances in information technology.
- d) The limitations of the national statistics system, among others, the lack of information disaggregation (ISIC at four digits) on public and private agents. This makes it difficult to accurately identify the copyright industries, which are often included or hidden in larger groupings.⁹ This limitation is notable in the partial copyright industries and the non-dedicated support industries and translates into problems of under- or over-estimation.¹⁰
- e) The problems of regularity and frequency in data collection and the different criteria applied in gathering and constructing information. This is the case with the household surveys, which have undergone various methodological changes since 2000. In the case of the Superintendency of Companies, the number of registered companies can vary from year to year due to the changes in the criteria required from companies obliged to give financial statement reports. Therefore, at the aggregate level, increases in the output or value added may occur due to the entry of new companies. These companies may already exist, but have not been required to report to the Superintendency of Companies.
- f) Differences in the sources of information regarding the coverage, regularity and methodology of estimation, etc.
- g) In the strict sense, the last economic census in Colombia was conducted in 1991. For this reason, updated specific information on the situation and economic activities of Colombian businesses do not exist.

⁸The protection given to the work is independent of the genre (artistic or literary), the form of expression (written, audio or audiovisual), and the merit and intended use of the work (Vega, 2003).

⁹In contrast, the North American Industry Classification System (NAICS), aside from including a system of "information media," allows the disaggregation of industries to six digits (Márquez et al., 2006).

¹⁰This problem of under- or over-estimation is due to the difficulty of separating or excluding elements in the partial copyright industries and the non-dedicated support industries but does not affect to the core copyright industries.

- h) The CBI organizations, with very few exceptions, do not develop their own economic information system to continuously monitor their sectors.
- i) Lack of information on small-scale or informal establishments. In the 13 major cities, where the CBI are concentrated, 58 per cent of the employees work in the informal sector and 16 per cent of these work in the industrial sector.
- j) Difficulty in monitoring e-commerce and virtual enterprises, which are becoming numerous and more important in the CBI.

Although this research faced many methodological limitations, it is worth mentioning that the methodology developed in the study presents certain strengths, especially if any future update is taken into account. For instance, the sources of information have shown improvement in terms of coverage of activities as a result of the efforts to "formalize" economic activities and to widen the tax base. Although the Superintendency of Companies is not an organization solely for statistical data collection, the criteria applied for data collection on businesses have the advantage of maintaining homogeneity (the financial statements must meet legal standards set by law), guaranteeing the comparison and temporal monitoring of activities of interest. One advantage of this source of information is that it is not plagued with the problem of lack of resources, which is the case with public statistical entities. This is a problem which normally affects the continuity of data collection.

2.3 Background to Measuring the Economic Contribution of the CBI

In Colombia, two studies have been undertaken to evaluate the contribution of cultural activities in the economy, i.e. their impact on GDP. The first study was carried out under the projects supported by the Andrés Bello Convention and some Ministries of Culture of Latin American countries (Colombia, Ecuador, Peru and Venezuela).

The second was conducted as part of the creation of cultural satellite accounts in the countries of the region. These satellite accounts were conceived as economic measurement systems of culture under the national system accounts framework of the statistical departments (DANE for Colombia), or the central banks of countries included in this research. Based on the guidelines of the CONPES Document¹¹ in December 2002, Colombia's Ministry of Culture, the Andrés Bello Convention, the National Statistics Department (DANE) and the National Copyright Directorate of the Ministry of Interior and Justice, agreed to join efforts in creating a cultural satellite account.

2.3.1 *The Study by the Andrés Bello Convention and the Ministry of Culture*¹²

In the 1980s, some Latin American countries began to conduct studies on the economic contribution of culture, based on the progress made by UNESCO and the research undertaken in other countries such as Spain. One of the developments in this direction was the Economy and Culture Project, in which the Andrés Bello Convention advanced the economic measurement of the cultural sector, building an initial analysis of the cultural industries in the region, which included an approximation of their contribution to GDP.

To identify the cultural industries, the following were chosen:

- Their raw materials are creations protected by copyright and fixed upon a tangible or electronic support.

¹¹ Guidelines for the Sustainability of the National Culture Plan 2001-2010: Towards a Democratic Cultural Citizenship. Conpes Document 3262.

¹² Andrés Bello Convention-Ministry of Culture (2001). Economics and Culture. An Approximation of the Economic Impact of Cultural Industries in Colombia, Bogotá.

- They include cultural goods and services fixed upon tangible or electronic support and produced, stored and distributed in series with general massive dissemination.
- They have their own processes of production, distribution and social appropriation.
- They are articulated with the market and marketing logic, or have the potential to do so.

Finally, this initiative arises from the need to fill an information vacuum on cultural industries in Colombia, their characteristics, market, incentive mechanisms and role in the country's economy. The importance of this study lies in its being the first institutional effort to deepen our knowledge on these activities not only in Colombia but in other countries in the region, since the project looked into the status of cultural industries in other countries such as Bolivia, Chile, Peru and Venezuela.

The paper, *Impact of Cultural Industries in Colombia*, presented some findings related to the generation of value added for the period 1995-2001. To evaluate the economic impact of these industries, three types of activities were analyzed in this document:

"Type 1: Corresponds to activities linked to cultural sector production and to some other activities, which although they are not linked to production, are activities related to storing and archiving the past and the history, such as museums, libraries and archives.

Type 2 (Related I): Includes activities "indirectly and closely related to the previous group". Some are activities that involve the use and distribution of cultural creations such as marketing activities and other activities related with the processes of production, such as printing activities.

Type 3 (Related II): Includes key inputs required and the "vehicle of transmission" of previous groups. (Ministry of Culture - CAB 2003)."

In order to draw up this classification, ISIC coding and data from the National Directorate of Taxes (DIAN) were used. The study produced the following results:

Table 2. Value Added of the Cultural Industries

Year	Direct	Related I	Related II	Total
1995	988,448	759,923	237,674	1,986,045
1996	1,163,853	838,958	197,594	2,200,406
1997	1,415,767	976,172	223,845	2,615,784
1998	1,560,922	1,152,574	243,604	2,957,100
1999	1,633,766	1,159,736	277,773	3,071,275
2000	1,817,021	1,339,234	420,204	3,576,459
2001	1,869,877	1,584,763	351,112	3,805,752

Source: Colombia's Ministry of Culture – CAB 2003.

Table 3. Participation of the Cultural Industries in GDP

Year	Direct	Related I	Related II	Total
1995	1.2	0.9	0.3	2.4
1996	1.2	0.8	0.2	2.2
1997	1.2	0.8	0.2	2.1
1998	1.1	0.8	0.2	2.1
1999	1.1	0.8	0.2	2.0
2000	1.0	0.8	0.2	2.1
2001	1.0	0.8	0.2	2.0

Source: Colombia's Ministry of Culture – CAB 2003.

As can be seen later on, these estimates differ from those presented in this paper (the estimated share is about 3.8 per cent of GDP for 2000) for two main reasons. In the first place, the scope or the coverage were not the same, as this current study included a greater number of activities. Second, the methodology and data sources used were also different. The study by the Ministry of Culture and the Andrés Bello Convention used mainly the fiscal data of the companies reported in the DIAN, while this study included information from the Superintendency of Companies and DANE.

Finally, it must be emphasized that this previous study opened the way for other initiatives which seek to provide social and economic recognition of these industries such as the Cultural Satellite Account project developed by DANE.

2.3.2 Cultural Satellite Accounts

As previously mentioned, it was from this first Latin American endeavor by the Andrés Bello Agreement to measure the impact of the cultural sector in national economies that the recommendation emerged to create cultural satellite accounts in the countries of the region. These satellite accounts were conceived as economic measurement systems of culture under the national system accounts framework of the statistical departments or the central banks of countries included in this research.

In Colombia, the cultural satellite account (CSC) was developed from late 2002, supported by the Ministry of Culture, the Andrés Bello Convention and the National Copyright Directorate of Colombia. This concept has been introduced within the financial accounting systems with the goal of "expanding the analytical capacity of national accounts in a flexible manner, without overloading or distorting the central system". (DANE 2005)

In the CSC system, the cultural sector is "defined in a practical way, based on the guidelines adopted and developed by the economy and culture project of the Andrés Bello Convention. This does not only include activities such as arts, folklore or tangible and intangible heritage, but also other activities by social researchers and anthropologists, from which much of the cultural processes flow, such as television, radio, advertising, film or publication of books, magazines and newspapers". (DANE, 2004) This broad spectrum of activities is known as the cultural industries.

In the satellite account, cultural goods and services are not only accounted for from the time of their inception, but also from their production, distribution and marketing, which allows access to these goods. For this purpose, the following activities are selected and grouped according to the following categories:

Direct activities: these are strictly linked to the generation, production and dissemination of culture. They include publishing of books, magazines and newspapers, film production and exhibitions, music publishing and production, television and radio production, performing arts presentations, advertising, services offered by tangible and intangible heritage and research services in the humanities.

Related activities I: related to the production of main inputs required (goods and services that are needed in the production of direct activities such as the goods and services for radio and television transmission, printing services and paper) and distribution and marketing activities (music, books and video stores, or distributors of goods).

Related activities II: means of dissemination (screens, televisions, radios or VHS).

The study set out the following objectives (DANE, 2004a):

- to establish the magnitude of cultural activity and compare it with the national economy;
- to come up with instruments that contribute to all decision-making processes, and the definition and evaluation of cultural policies;
- to identify in the main framework the set of cultural activities and implement the measurement mechanisms of the national accounts system;
- to make available to the community (business organizations, creators, academia, etc.) reliable information on cultural activities;
- to achieve an economic measurement of culture that allows international and inter-sectoral comparisons;
- to provide information to identify the strengths and weaknesses of the various cultural activities from their economic dimension;
- to enrich the economic analysis of culture with non-monetary indicators.

The results of the CSC for the year 2000 are as follows:

Table 4. Value Added Cultural Activities, Year 2000

Publishing and printing	607,943
Radio, television and cable program transmission	144,858
Advertising, photography, and research and development	1,079,591
Recreational activities, cultural and recreational services	1,162,194
Museums	23,108
Artistic education	150,911
Government	116,632
Total Value Added Cultural Activities	3,285,237
Participation in GDP (%)	1.67

Source: Colombia's National Statistics Department.

These results are not comparable with those presented in this study because the activities that are included in each of the specific classifications adopted by the DANE in the Satellite Account differ in terms of the scope of the CBI. Despite sharing a set of common activities, the Satellite Account includes some cultural

and leisure activities that are not protected by copyright, which means a difference of content from specific industries given by WIPO (2003).¹³ The scope of the creative industries as determined by the intellectual property right is clearly expressed in the argument that "the need for an approximation based on copyright is of paramount importance, since it provides the proper conceptual framework for the identification, the compilation of statistics and their analysis." (WIPO, 2003)

With regard to the continuity of this account within the national accounts system, it was not possible in the documents reviewed to establish whether this product will have future sustainability. For the moment, only results for the period mentioned above are published.

¹³This discussion on the definition and scope of cultural activities and copyright can be found in the study by García, Zofio, Herrarte and Moral (2008).

3 Methodology for the Estimation of Value Added

The usual classification of industries involving copyright follows the categories proposed by WIPO (2003), and is divided into four groups:

1. The Core Industries

This category includes all industries that are dedicated entirely to the creation, production, representation, exhibition, communication or distribution and sale of material protected by copyright (music, literature, theatrical productions, film, media communication, visual arts, advertising services and collective copyright management).

2. The Interdependent Industries

These industries contribute to the production, manufacture and sale of equipment. Their function is to facilitate the creation, production and use of material protected by copyright (manufacture and sale of appliances such as televisions, computers and CD players, musical instruments and photographic equipment, etc.).

3. The Partial Industries¹⁴

Included in this category are some activities that are related or linked to material that is protected by copyright (such as jewelry, architecture, handicraft, etc.).

4. The Non-Dedicated Support Industries

These are based indirectly and marginally on materials protected by copyright, therefore their efforts are equally dedicated to other activities which are not interdependent (telephony, transport and wholesale and retail).¹⁵

Together these four groups are known as the copyright-based industries.

Table 5. WIPO List of CBI

Copyright Industry Sub-Groups	Activities
Core Copyright Industries	
Press and literature	<ul style="list-style-type: none"> - authors, writers, translators; - newspapers; - news and feature agencies; - magazines/periodicals; - book publishing, - cards and maps; - directories and other published materials; - pre-press, printing, and post-press of books, magazines, newspapers, - advertising materials; - wholesale and retail of press and literature (book stores, news stands and libraries.)

¹⁴The element attributable to copyright varies depending on the protection granted by national legislation (WIPO 2005).

¹⁵The contribution of copyright to these industries is calculated on the basis of a specific factor (WIPO, 2005).

Copyright Industry Sub-Groups	Activities
Music, theatrical productions, opera	<ul style="list-style-type: none"> - composers, lyricists, arrangers, choreographers, directors; - performers and other personnel; - printing and publishing of music; - production/manufacturing of recorded music; - wholesale and retail of recorded music (sale and rental); - artistic and literary creation and interpretation; - performances and allied agencies (booking agencies, ticket agencies).
Motion picture and video	<ul style="list-style-type: none"> - writers, directors, actors etc; - motion picture and video production and distribution; - motion picture exhibition; - video rentals and sales including video on demand; - allied services.
Radio and television	<ul style="list-style-type: none"> - national radio and television broadcasting companies; - other radio and television broadcasters; - independent producers; - cable television (systems and channels); - satellite television; - allied services.
Photography	<ul style="list-style-type: none"> - studios and commercial photography; - photo agencies and libraries (photo-finishing labs should not be included).
Software and databases	<ul style="list-style-type: none"> - programming, development and design; - manufacturing, wholesale and retail pre-packaged software (business programs); - video games, educational programs etc.; - database processing and publishing.
Visual and graphic arts	<ul style="list-style-type: none"> - artists; - art galleries and other wholesale and retail; - picture framing and other allied services; - graphic design.
Advertising services	<ul style="list-style-type: none"> - agencies, buying services (the price of advertising should not be included).
Copyright collective management societies	(turnover should not be included)
Interdependent Copyright Industries	

Copyright Industry Sub-Groups	Activities
Manufacture, wholesale and retail (sales and rental) of:	<ul style="list-style-type: none"> - TV sets, radios, VCRs, CD players, DVD players, cassette players, electronic game equipment and other similar equipment; - computers and equipment; - musical instruments.
Manufacture, wholesale and retail (sales and rental) of:	<ul style="list-style-type: none"> - photographic and cinematographic instruments; - photocopiers; - blank recording material; - paper.
Partial Copyright Industries	
Apparel, textiles and footwear Jewelry and coins Only that portion which is attributable to works and other protected subject matter should be included	<ul style="list-style-type: none"> - apparel, textiles and footwear; - jewelry and coins; - other crafts; - furniture; - household goods, china and glass; - wall coverings and carpets; - toys and games; - architecture, engineering, surveying; - interior design; - museums.
Non-Dedicated Support Industries	
	<ul style="list-style-type: none"> - general wholesale and retailing; - general transportation; - telephony and Internet.

Source: WIPO (2003). *Guide on Surveying the Economic Contribution of the Copyright Based Industries*.

3.1 Identification of the CBI in Colombia

Based on the experience of international studies and national legislation on the subject, and under the auspices of the National Copyright Directorate of Colombia, this study has proceeded to identify and classify Colombian industries which are directly or indirectly associated to industries under intellectual copyright protection. Likewise, it seeks to establish comparability with other countries especially in Latin America. Sources of information relevant to their measurement have been identified.

The details of these industries were originally developed under the Standard Industrial Classification (SIC) of the US, but based on the International Standard Industrial Classification (ISIC) (CIIU in Spanish). This system organizes information on companies and products in major groups such as construction, manufacturing and services, but these groups can be subdivided to achieve more detailed information, depending on the country.

Subsequently, up to 2002, this classification was even more customized for the US. The North American Industry Classification System (NAICS) was adopted to give a more detailed classification (six digits instead of four in the ISIC). The objective was to track the copyright industries more precisely. In this regard, reports prepared by the International Intellectual Property Alliance (Siwek, 2002) noted that the "focus of the new system is to bring together the industries that employ similar production processes... also, there will be 20 sectors instead of 10 in an attempt to capture better the transformation of the U.S. economy toward the service economy".

In view of these developments, it is necessary to highlight certain differences between Colombia and other countries, especially the US, on the structure of economic sectors that make up the CBI. In the US, interdependent industries such as the development and production of information technology, consumer electronic devices and computers are very important. In Colombia, these industries are undeveloped and their share in generating value added within the CBI is very low. This situation is confirmed by the behavior of foreign trade in Colombia, which shows a trade deficit due to imports of technological and electronic equipment.

As a control mechanism to define the scope of products of the CBI, a comparison was made with the items included in the studies for the US. Based on the ISIC classification in these studies, and for Colombia (ISIC adapted for Colombia), a correlation and validation were made and gave the following results.

Table 6. Correspondence between the ISIC and the ISIC adjusted for Colombia

	ISIC adjusted for Colombia	ISIC
Core	25	29
Interdependent	13	16
Partial	25	22
Non-Dedicated Support	35	20
Total	98	87

Figures indicate number of four-digit items.

Source: This study.

In a few cases, the descriptions of the items for the same headings at four digits between the two classifications were very different.¹⁶ In many cases, the items in the Colombian classification were disaggregated but not in the ISIC, which is why there is a significant difference in the number of industries considered in both cases.

Specifically, in this first phase, divisions, sectors and sub-sectors covered in the study, according to the ISIC and the National System of Employment, have been identified. This operational scope of the objective of the study was based on consultations with the National Copyright Directorate of Colombia. Under these definitions and classifications of the CBI, there were three types of observations:

- Activities with available data, which are the object of the study, are clearly delineated in the National Accounts and other statistics.

¹⁶ For example, the 5151 code in the US deals with wholesale of computers (wholesale of computers, computer peripheral equipment and software), but for Colombia, this item is "wholesale of solid fuels, liquid, gaseous and related products." Therefore, this item was approved for Colombia as code 5163.

- Activities included in larger groupings which have to be broken down.
- Activities which have no available data, and thus the need to identify potential sources of data (primary and secondary) and method of obtaining data (interviews, surveys, etc.). Where there are no reliable statistical data, reasonable estimates have to be used.

It is expected, then, that this first approximation will be refined, not only in terms of the number of industries considered (98), but also to the degree for which they are accounted, depending on whether such items can be disaggregated to avoid duplication and to enhance accuracy of measurement. The details of industries finally included can be found in Appendix I.

Table 7. Number of CBI in the ISIC adapted for Colombia

Core	Interdependent	Partial	Non-Dedicated Support	Total
25	13	25	35	98

Figures indicate number of four-digit items.
Source: This study.

3.2 Sources of Information

Estimates of the Value Added of the CBI are based primarily on secondary sources:

- Annual Manufacturing Survey (EAM) of DANE¹⁷
- Financial statements of the Superintendency of Companies
- National Household Survey
- Annual Survey of Services
- Annual Trade Survey
- DANE National Accounts
- Other sources: financial statements of Sayco-Acinpro

3.2.1 Annual Manufacturing Survey (EAM)

The EAM is an ongoing survey conducted by the DANE since 1956 and currently comprising the group of manufacturing establishments with 10 or more employees (both permanent and temporary). In 2005, this group comprised 7,524 establishments of which 2,526 (34 per cent) corresponded to the CBI in that year.¹⁸

From 1970 to 2000, the nomenclature of the EAM was based on ISIC revision 2. From 2001 onwards, this has been governed by ISIC revision 3. Given that the correspondence between the two revisions at four-digit disaggregation is not one to one, there was a wide variation in some items between 2000 and 2001, which can be attributed to this lack of correspondence.

For industrial manufacturing activities not covered by the EAM, there was no information available which was comparable with this survey. In the case of the CBI, it was necessary to use indirect methods of measurement.

3.2.2 Superintendency of Companies

The Superintendency of Companies is a government agency under the Ministry of Trade, Industry and Tourism, charged with the surveillance, inspection and control of corporations.

¹⁷ The National Statistics Department (DANE) is the entity responsible for the planning, collection, processing, analysis and dissemination of official statistics.

¹⁸ Or establishments with a production value equal to or greater than Col\$ 103 million in 2002.

This entity keeps relevant information on the financial status of companies with a minimum total income of Col\$2,000 million from all economic activities (2005). The variables included in the financial statements meet basic accounting criteria (cash, current assets, current liabilities, capital subscribed and paid, operational income, gross profit, etc.).

In 2005 the total number of companies registered was 19,729, of which 3,136 corresponded to CBI sectors. By 2000, the number of interdependent companies in the CBI was 1,517.

For the purposes of this study, relevant information based on operating income (OI) of service companies (in the service sector) is used. However, OI for some manufacturing companies in some sectors was taken into consideration to evaluate inconsistencies in the EAM.

3.2.3 System of National Accounts (SNA)

The System of National Accounts is managed by DANE and is based on the internationally applied System of National Accounts (1993). The information used in this present study relates to production accounts and income generation of economic activities, which were used as control variables for the results of the CBI. On the other hand, the implicit price index of GDP was used to deflate the value added series of the CBI at current prices.

3.2.4 Annual Survey of Services

This survey was first carried out by DANE in 1994 and its coverage has expanded in recent years. It includes post and telecommunications, advertising, information technology, temporary employment agencies and security services, and restaurants and employment services. The survey recorded data on employment, production, intermediate consumption and value added, among others. In this study, data were used for advertising and information technology sectors and related activities, which served to validate the estimates made based on the data from the Superintendency of Companies.

3.3 Measurement of Value Added (VA)

The value added corresponds to the value of final goods and services to the economy and is calculated by subtracting the value of inputs used (goods and services i.e. raw materials, fuel, energy, etc.) which are called intermediate consumption. The value added is denominated gross value added (GVA), when the amount of depreciation and consumption of fixed capital has not been subtracted, and net value added after deduction of these items.

For this study, the GVA was derived taking into account the availability of information from available sources.

3.3.1 Annual Manufacturing Survey

Companies included in the Annual Manufacturing Survey reported a considerable number of variables including total employees, gross output, intermediate consumption, GVA, gross fixed capital formation, and so on. Since the GVA is directly taken from this survey, there is no need to make estimates and thus the value of this variable reported by this survey is used.

3.3.2 Superintendency of Companies

In the case of the Superintendency of Companies, it is necessary to estimate the GVA, as it is not part of the information collected by this entity. The GVA is calculated based on the OI, which is used as a proxy for gross production (GP) used in national accounts, according to the following identities. This procedure is

covered in the Guide on Surveying the Economic Contribution of the Copyright-Based Industries (WIPO, 2003, pp. 49-50) in connection with supplementary statistics:

$$GP = IC + GVA \quad [1]$$

$$GVA = GP - IC \quad [2]$$

Where IC is the value of intermediate consumption (intermediate inputs). Given that it is not possible to calculate the GVA with identity [2] because the value of the intermediate inputs (raw materials, energy, leasing, packaging, transport, etc.) is not known, the GVA can be estimated with a coefficient β , according to the following equation:

$$\beta = GVA / GP \quad [3]$$

The coefficient β is similar to the concept of technical coefficients of input-output analysis, which can be expressed as the structural relationship between the production value of a particular good or service and the value of intermediate inputs used in such production. The value of coefficient β is directly proportional to the value of production and is considered to be stable in the short and medium term. Once the operational income is known, the GVA is then calculated using the formula:

$$GVA = OI * \beta \quad [4]$$

The coefficient β can be calculated from national accounts with the identity [3] for the economic activities (divisions and groups) listed below, according to the disaggregation of the SNA:

- Trade
- Land cargo transport
- Air cargo transport
- Water transport services
- Complementary and auxiliary transport services
- Post and telecommunications
- Services to business enterprises
- Association and recreational services

3.4 Adjustments to Calculate the GVA of Certain Transport and Trade Activities (copyright factor)

Given the transversal or general nature of the partial copyright industries and non-dedicated support industries, and given the difficulties in disaggregating existing statistics in Colombia (ISIC four digits) to quantify accurately the share of copyright in the value added and employment generation, it is necessary to estimate the contribution of these industries to the entire economy.

To reduce the risk of over-estimation, and following WIPO's methodology, a weight or copyright factor is assigned to value added and employment generation, which will represent the specific weight of copyright-protected activities within partial copyright and non-dedicated support industries.

In this sense, and in accordance with WIPO (2003) and Penyigey and Munkácsi (2005), the core and interdependent CBI groups do not require any adjustment once GVA and employment are estimated, as

their contribution to copyright is 100 per cent. On the contrary, the activities included in the partial copyright industries have a weight of between 0.5 per cent and 50 per cent over the total economic activity. Non-dedicated support industries primarily associated with distribution and marketing of copyright production, are assigned a factor of 5.7 per cent (Table 8).

In the present study, two methods have been employed to calculate or adjust the copyright factor of the CBI to guarantee that the weight of the partial and support industries are appropriately considered:

1. For the partial copyright industries, the adjustment factors of the Hungarian study were used (Penygey and Munkácsi, 2005). These are presented in the following table:¹⁹

Table 8. Adjustment Factors for the CBI

Description	Copyright Factor
Core	1.0
Interdependent	1.0
Partial	
Apparel, textiles and footwear	0.005
Jewelry	0.25
Other crafts	0.4
Furniture	0.05
Ceramic and glass articles	0.005
Wall covering and carpets	0.02
Toys and computer games	0.5
Architecture, engineering, surveying	0.1
Museums	0.5

Source: Penygey and Munkácsi (2005).

2. Part of the interdependent industries related to the manufacture of cellulose pulp, paper and paperboard (such as toilet paper, bags, etc.), is not associated with copyright generating activities. This is why, based on information from the Annual Manufacturing Survey, the value corresponding to paper pulp, toilet paper and manufacture of non-printed bags was excluded. The values for this sector for the period 1997-2004 were adjusted using the adjustment factor of 10 per cent to consider solely the production relating to activities considered to be cultural.
3. For the non-dedicated support industries (trade, transport, post and telecommunications) a procedure based on coefficients of the input-output matrix (IOM) was used to estimate the proportion of industrial manufacturing activities classified as core and interdependent-related industries in the CBI in trade and transport, and core and interdependent industries in the CBI plus the partial industries' participation in post and telecommunications. This is explained in Annex 3.

¹⁹The Mexican study used a simple average of the weights used in the estimates of the US (Siwek, 2004) and Hungary (Penygey, et al., 2005). The reason given by the authors, in the case of the US, is the use of a common information system and the links between the US and Mexican economies. Also, the use of weights from the Hungarian model is justified for a middle-income country like Mexico (Márquez et al., 2006).

The coefficients obtained with this method are presented in Table 9, which are multiplied by the GVA of each industry for the respective year.

Table 9. Input-Output Coefficients for the Support Industries

	2000	2001	2002	2003	2004	2005
Colombia. IOM Coefficients (U) for CBI land transport (row vector)						
Total	0.0122	0.0126	0.0125	0.0118	0.0121	0.0277

	2000	2001	2002	2003	2004	2005
Colombia. IOM Coefficients (U) for CBI air transport (row vector)						
Total	0.0202	0.0288	0.0280	0.0261	0.0288	0.0635

	2000	2001	2002	2003	2004	2005
Colombia. IOM Coefficients (O) for CBI wholesale and retail trade (column vector)						
Total	0.0769	0.0707	0.0704	0.0721	0.0553	0.0516

	2000	2001	2002	2003	2004	2005
Colombia. IOM Coefficients (U) for CBI post and telecommunications (row vector)						
Total	0.0290	0.0335	0.0323	0.0343	0.0362	0.0358

Source: This study, based on figures from Colombia's National Statistics Department.

3.5 Treatment of Informal Sectors

The employment surveys, whose observation unit is the home, are done at national level and allow the quantification of employment in informal activities, in particular self-employment. The national surveys allowed the calculation of the value added of some informal activities (musicians, handicrafts, etc.), by obtaining the employment numbers and the average income for each activity.

3.6 Deflators

To convert the value added of copyright-generating industries to real prices, implicit deflators of the National Accounts were used for 20 industrial and service sectors (Table 10).

Table 10. Implicit Prices in National Accounts for the CBI, Base Year 1994 = 100

Code National Accounts	Description	2000	2001	2002	2003	2004	2005
22	Yarn and thread; woven and tufted textile fabrics	151.4	155.9	157.0	173.7	184.4	202.5
23	Textile articles other than apparel	194.6	204.5	207.9	222.8	244.0	250.5
24	Knitted or crocheted fabrics; wearing apparel	204.9	214.5	217.3	227.5	245.6	252.2
25	Leather and leather products; footwear	230.9	262.7	270.5	280.1	287.5	287.2
26	Products of wood, cork, straw and plaiting materials	226.6	261.3	303.9	325.8	355.6	370.1
27	Pulp, paper and paper products	161.3	162.8	169.5	189.3	203.0	204.7
28	Printed matter and related articles	255.9	264.6	280.9	310.7	326.3	336.0

30	Basic chemicals and other chemical products	222.7	226.4	239.4	270.9	291.7	312.7
32	Glass and glass products and other non-metallic products n.e.c.	233.7	246.0	262.4	286.8	293.7	286.4
33	Furniture; other transportable goods n.e.c.	175.4	176.2	182.8	216.7	226.5	235.2
35	Basic metal and fabricated metal products, except machinery and equipment	230.2	244.7	272.1	318.8	378.5	404.6
37	Electrical machinery and apparatus	173.6	177.7	190.0	208.8	220.0	234.6
41	Wholesale and retail trade services	232.4	243.6	256.7	269.4	274.7	279.4
44	Land transport services	194.8	219.4	236.0	255.8	284.0	306.2
45	Water transport services	188.9	196.0	201.1	214.6	231.3	226.0
46	Air transport services	238.8	262.1	277.1	309.8	347.0	392.9
47	Supporting and auxiliary transport services	221.0	234.2	239.2	253.5	253.1	259.4
48	Post and telecommunication services	232.2	264.4	274.6	286.6	308.9	317.7
51	Business and production services	220.0	242.0	252.8	269.6	288.3	307.2
Code National Accounts	Description	2000	2001	2002	2003	2004	2005
55	Services of organizations; recreational and other market services	246.5	263.7	276.8	291.9	311.0	327.1
GDP		235.2	249.9	264.5	286.1	307.7	325.2

Source: National Accounts.

Table 10 shows the relative increase in price of three service activities (air transport services, post and telecommunication services and recreational association services) and four industry activities (print and similar articles, wood products, cork and straw, leather products and base metals) which may explain the higher contribution of the CBI to the value added in constant prices.²⁰

²⁰The study does not go deeper into the determinants of the growth in sectoral prices.

4 Results of this Study for Colombia

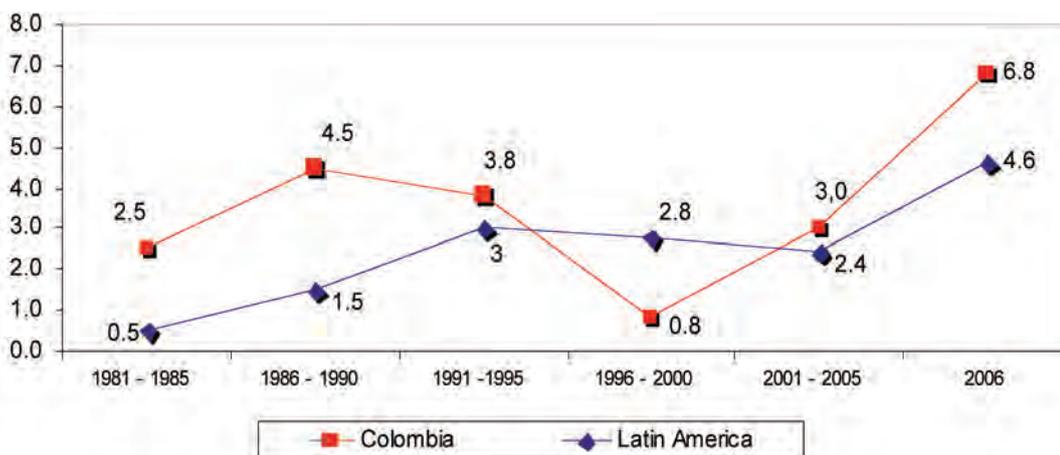
The results of the quantification of the economic contribution of the copyright-based industries to the value added output (GDP), foreign trade (exports and imports) and employment in Colombia during the period 2000-2005, are presented below.

In this context, the following paragraph presents a brief description of the structure and the evolution of the Colombian economy during the period 2000-2005.

4.1 Performance of the Colombian Economy

Throughout the 1980s, the Colombian economy was characterized by its stability and major growth in contrast to the slack performance of other Latin American economies, which were overwhelmed by debt crises. During this period, Colombia grew at a rate of 3.7 per cent while average growth for Latin American countries during this decade was only 1.1 per cent (Chart 1).

Chart 1. Five-year Growth of GDP



Sources: CEPAL and DANE.

In the following decade, the liberalization of the Colombian economy created conditions for major growth. In 1990, the economy was growing at 2.1 per cent, but with the influx of capital investment, high growth of internal private debt, increase in public expenditure and strong demand, the economy experienced robust expansion at a rate of 4 per cent during the period 1991-1995. This performance slightly outperformed the Latin American growth average.

However, this progressive situation was quickly reversed, resulting in a negative growth rate of 4.2 per cent in 1999, the lowest level in Colombian economic history. The revaluation of the Colombian currency, high interest rates, capital flight and international instability explain the Colombian economic crisis at the end of the 1990s.

Efforts to guarantee macroeconomic stability, progress made in the implementation of structural reforms and the strong dynamism of external demand attributable to a favorable international environment, allowed the Colombian economy to recover in 2000, experiencing a growth rate of 2.9 per cent. From 2003 onwards, the economy was growing at rates higher than 4 per cent, and in 2006 it reached 6.8 per cent, a record in the last quarter century. These growth rates greatly exceeded the average in the region (Chart 1).

Table 11. Total GDP and GDP per capita

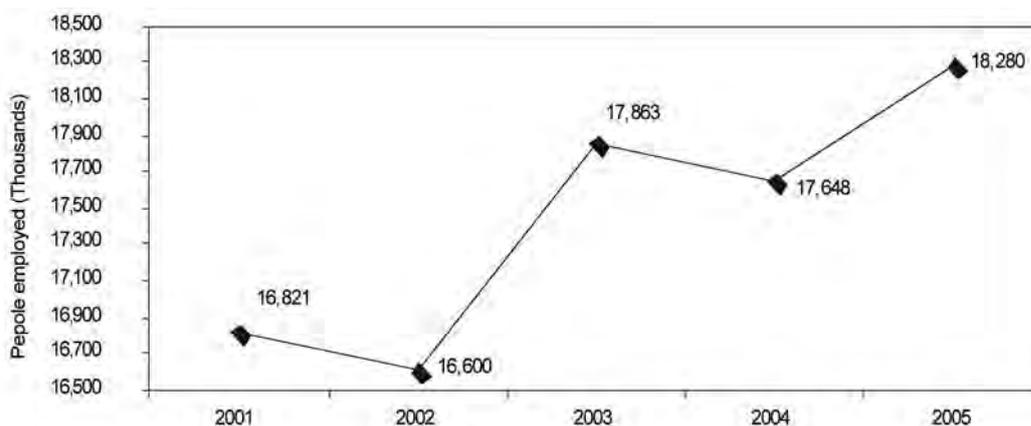
Millions of US\$ and 1994 prices

	2000	2001	2002	2003	2004	2005
GDP total US\$	83.786	81.990	81.122	79.407	98.143	122.939
GDP per capita US\$	1.980	1.904	1.851	1.781	2.165	2.670
GDP total US\$ base 1994	89.968	91.292	93.057	96.647	101.351	106.136
GDP per capita US\$ base 1994	2.126	2.120	2.123	2.168	2.236	2.305

Source: This study, based on figures from Colombia's National Statistics Department and Central Bank.

This sustained growth led to the decline in urban unemployment from 16 per cent in 2000 to 12.2 per cent by the end of 2005. Similarly, during the same period, the poverty level of the country went down from 56 per cent in 2000 to 49 per cent in 2005.

Chart 2. Employment Trends 2001–2005



Source: DANE

4.2 Structure of the Colombian Economy

In the course of the last two and a half decades, the Colombian economy has experienced an important and profound process of structural change, where the service sector now leads the production sector (46 per cent), followed by industry (14.7 per cent), agriculture (13.4 per cent) and construction (5 per cent). In this structural composition, there are four aspects that can be emphasized: i) the constant participation of the service sector (starting in the mid-1970s, it already represented 40 per cent); ii) the loss of participation of the agricultural sector (17 percentage points with respect to 1975); iii) the stable participation of the industrial sector (14 per cent); iv) the emergence and increase in the mining sector from the mid-1980s.

Table 12. Percentage Distribution of GDP by Economic Activity, 2000-2005

Economic Activity	2000	2001	2002	2003	2004	2005
Agriculture, hunting, forestry, fishing	14.4	14.2	13.9	13.8	13.7	13.4
Mining	4.9	4.6	4.4	4.9	4.8	4.7
Electricity, gas, water	3.1	3.2	3.1	3.1	3.0	3.0
Manufacturing	14.4	14.4	14.5	14.6	14.9	14.7
Construction	4.0	4.1	4.5	4.9	5.2	5.5
Wholesale, retail trade, restaurants and hotels	10.6	10.7	10.7	10.9	11.0	11.5
Transport, storage and communication	7.9	8.1	8.1	8.1	8.1	8.1
Financing, insurance, business and production services	17.3	17.5	17.5	17.8	17.8	17.5
Community, social and personal services	21.0	20.8	20.4	19.6	19.2	19.0
Financial intermediary services	3.9	4.0	3.8	4.1	4.4	4.5
Total Value Added	93.7	93.5	93.4	93.4	93.3	92.8
Taxes less subsidies on products	6.3	6.5	6.6	6.6	6.7	7.3
Gross Domestic Product	100	100	100	100	100	100

Source: Colombia's National Statistics Department.

Table 13. GDP at Constant Prices by Economic Activity, 2000-2005

Economic Activity	2000	2001	2002	2003	2004	2005
Agriculture, hunting, forestry, fishing	10,725	10,686	10,699	10,992	11,452	11,779
Mining	3,653	3,430	3,413	3,880	4,001	4,120
Electricity, gas, water	2,321	2,392	2,411	2,463	2,530	2,611
Manufacturing	10,723	10,866	11,148	11,649	12,461	12,948
Construction	2,967	3,082	3,463	3,922	4,346	4,863
Wholesale, retail trade, restaurants and hotels	7,861	8,106	8,259	8,709	9,238	10,105
Transport, storage and communication	5,877	6,112	6,259	6,440	6,788	7,134
Financing, insurance, business and production services	12,877	13,165	13,474	14,240	14,882	15,407
Community, social and personal services	15,578	15,691	15,650	15,625	16,053	16,698
Financial intermediary services	- 2,916	- 2,989	-	- 3,285	-	-
			2,939		3,675	3,989
Total Value Added	69,667	70,540	71,835	74,636	78,076	81,675
Taxes less subsidies on products	4,697	4,918	5,082	5,249	5,637	6,388
Gross Domestic Product	74,364	75,458	76,917	79,884	83,714	88,063

Source: Colombia's National Statistics Department.

Table 14. GDP Growth Rate by Economic Activity, 2000-2005

Economic Activity	2000	2001	2002	2003	2004	2005
Agriculture, hunting, forestry, fishing	3.8	-0.4	0.1	2.7	4.2	2.9
Mining	-10.3	-6.1	-0.5	13.7	3.1	3.0
Electricity, gas, water	0.9	3.0	0.8	2.2	2.7	3.2
Manufacturing	11.8	1.3	2.6	4.5	7.0	3.9
Construction	-3.9	3.9	12.4	13.3	10.8	11.9
Wholesale, retail trade, restaurants and hotels	7.3	3.1	1.9	5.4	6.1	9.4
Transport, storage and communication	1.5	4.0	2.4	2.9	5.4	5.1
Financing, insurance, business and production services	-1.0	2.2	2.3	5.7	4.5	3.5
Community, social and personal services	0.6	0.7	-0.3	-0.2	2.7	4.0
Financial intermediation services	-15.1	2.5	-1.7	11.8	11.9	8.5
Total Value Added	3.1	1.3	1.8	3.9	4.6	4.6
Taxes less subsidies on products	-0.1	4.7	3.3	3.3	7.4	13.3
Gross Domestic Product	2.9	1.5	1.9	3.9	4.8	5.2

Source: This study, based on GDP at constant price figures from Colombia's National Statistics Department.

4.3 CBI Generation of Value Added

This section seeks to study the economic contribution of the CBI to the gross national value added.

4.3.1 Trends of the Value Added of the CBI

As shown in Table 15, the total gross value added (GVA) of the CBI in Colombia represented Col\$9.5 millions of millions in the year 2005 and Col\$5.7 millions of millions in 2000.

Table 15. CBI Value Added, 2000-2005

	Thousand millions of Col\$					
	2000	2001	2002	2003	2004	2005
At Current Prices						
GDP Colombia	174,896	188,559	203,451	228,517	257,746	285,313
Total CBI	5,732	6,092	6,824	7,669	8,458	9,531
Core	3,077	3,345	3,760	4,215	4,656	5,330
Interdependent	1,524	1,576	1,731	1,982	2,148	2,260
Partial	440	484	532	572	668	727
Non-Dedicated Support	691	688	801	901	986	1,214

²⁰ Approximately 4.800 million US dollars in 2005.

At 1994 Prices

Thousand millions of Col\$

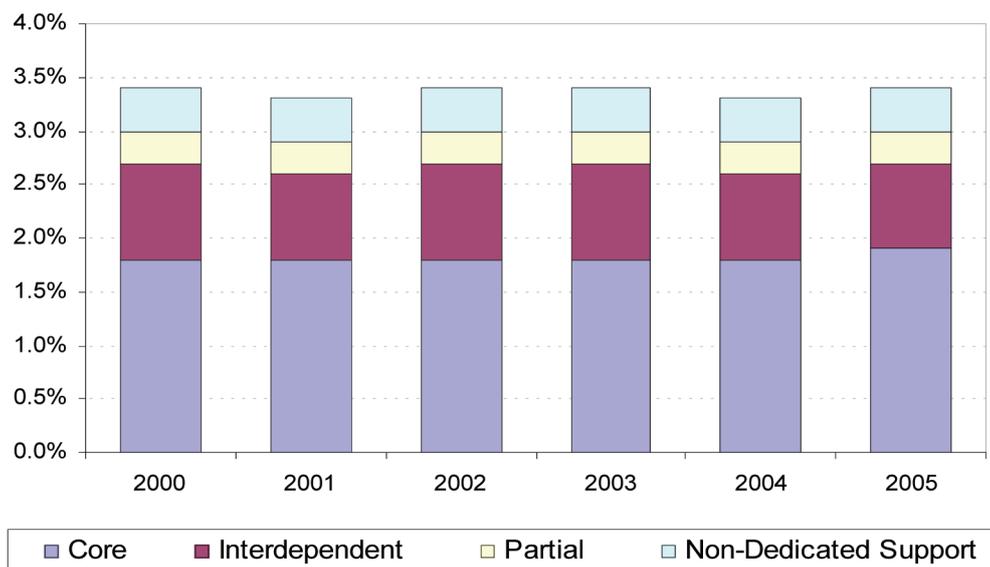
GDP Colombia	74,364	75,458	76,917	79,884	83,772	87,728
Total CBI	2,417	2,427	2,582	2,675	2,798	3,053
Core	1,277	1,295	1,388	1,446	1,510	1,669
Interdependent	627	632	658	678	700	713
Partial	207	213	215	209	222	232
Non-Dedicated Support	307	287	321	342	366	439

Participation in GDP

GDP Colombia	100	100	100	100	100	100
Total CBI	3.3	3.2	3.4	3.4	3.3	3.3
Core	1.8	1.8	1.8	1.8	1.8	1.9
Interdependent	0.9	0.8	0.9	0.9	0.8	0.8
Partial	0.3	0.3	0.3	0.3	0.3	0.3
Non-Dedicated Support	0.4	0.4	0.4	0.4	0.4	0.4

Source: This study.

Chart 3. Contribution of the CBI to GDP, 2001-2005 (%)



Source: This study.

In real terms, that is, discounting price increases, the GVA of the CBI increased from Col\$2.4 millions of millions in 2000 to Col\$3.1 millions of millions in 2005 (at 1994 prices), as shown in Table 15.

Table 16. Real Growth Rates of GDP and the CBI in Colombia

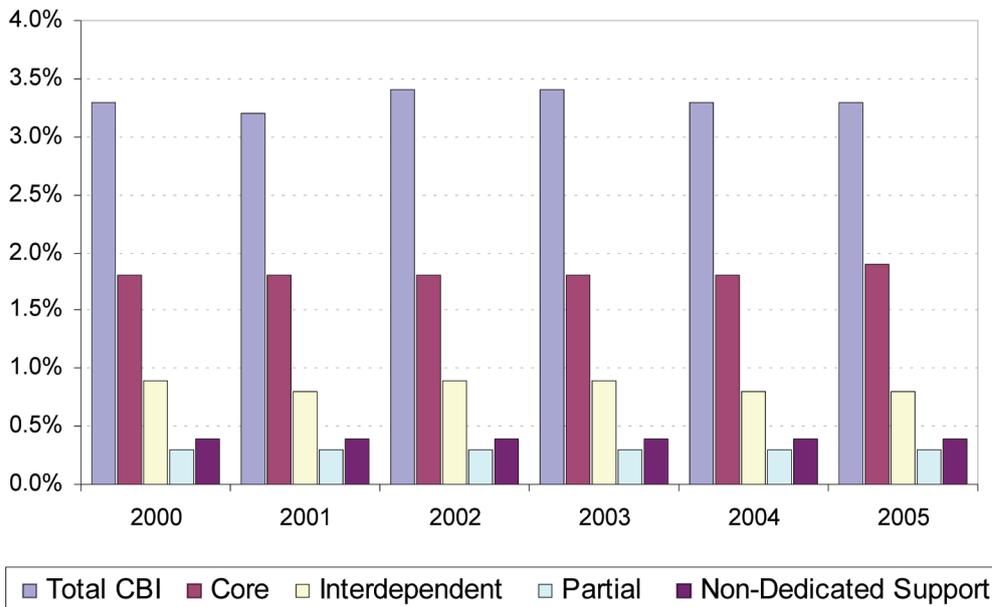
	2001	2002	2003	2004	2005
GDP Colombia	1.5	1.9	3.9	4.8	5.2
Total CBI	0.4	6.4	3.6	4.6	9.1
Core	1.4	7.2	4.2	4.5	10.5
Interdependent	0.9	4.1	3.0	3.2	1.9
Partial	2.7	1.3	-2.9	6.0	4.6
Non-Dedicated Support	-6.3	11.6	6.7	7.1	19.9

Source: This study.

Using the total Colombian GDP as a reference, the average contribution of CBI was 3.3 per cent in the period studied. This participation showed minimal variation, from a 3.2 per cent share in 2001 to a maximum of 3.4 per cent for 2002 and 2003, as shown in Chart 3. With regard to the other sectors of the Colombian economy, in 2005 the share of the CBI in GDP was higher than the participation of crude oil extraction (3.2 per cent), the agri-food industry (3.2 per cent) and the generation of electricity and gas (3.2 per cent).

The relative growth of the CBI implies that these activities have been growing at a faster pace than the entire Colombian economy. Figures show that the average annual growth rate of GDP during the period 2000-2005 was 3.4 per cent, while that of the CBI was 4.8 per cent.

Chart 4. The CBI Contribution to GDP, 2000-2005 (%)

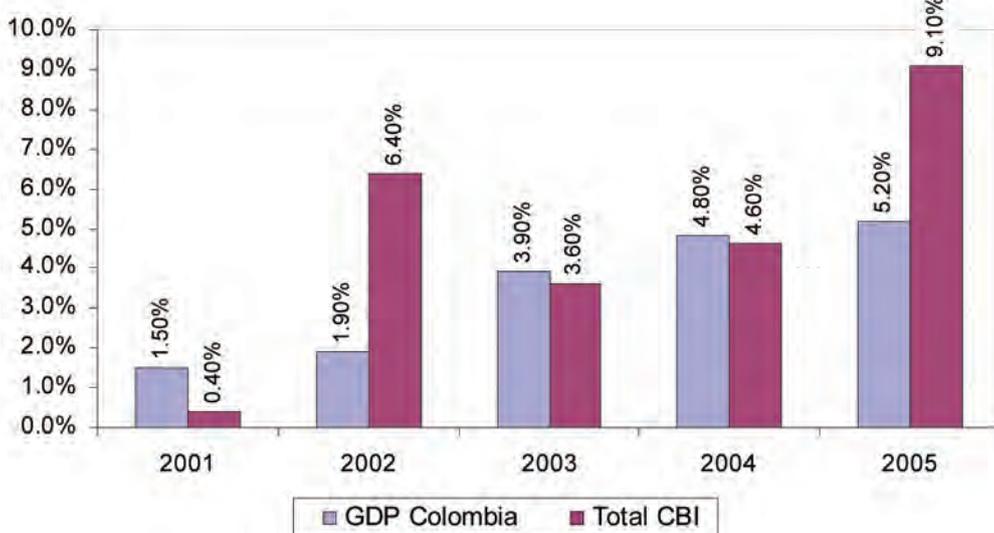


Source: This study.

The performance of CBI can also be seen in Chart 5, which shows the annual percentage change of the real GDP and GVA of the CBI (at 1994 Col\$ prices). As can be observed for the given period, the CBI performed better compared with the entire economy, behavior that can be explained by the growing importance of activities related to information technology, television, publicity and the sales trends of technological articles or products.

This growth coincides with the country's economic recovery after a period of low growth at the end of the previous decade, and with the deepening of the process of internationalization of the Colombian economy, which is demonstrated in the unprecedented growth of foreign investment in several sectors including, among others, those related to the CBI such as, telecommunications, radio, television and publications.

Chart 5. Real Growth of GVA, 2001-2005 (%)



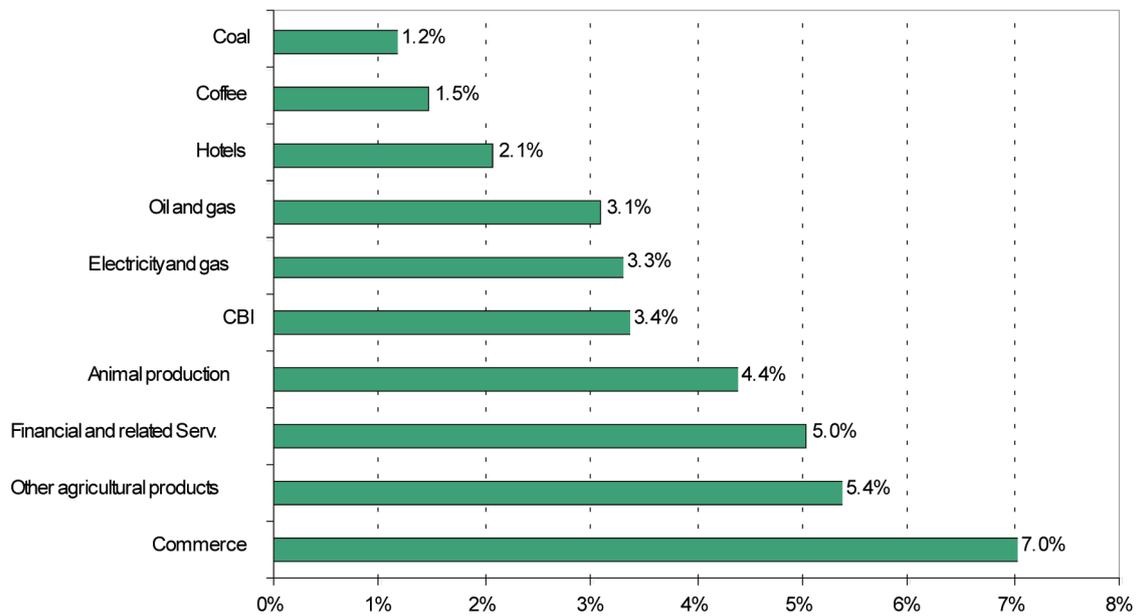
Source: This study.

4.4 The CBI in the National Context

In order to illustrate the economic importance of the CBI in the national context, Chart 6 presents a comparison of the contribution of these activities with other important sectors of the economy to GDP.

The CBI have a share similar to that of electricity and gas, slightly higher than the contribution of crude oil and natural gas extraction and more than double that of coffee and coal. The latter comparison emphasizes the importance of the CBI in national output since coffee and coal are two important Colombian products, which have a significant share in the global market. The CBI share is overtaken, however, by sectors in the service industry such as finance and trade. In the primary sector, it is also overtaken by some agricultural products and animal rearing.

Chart 6. Average Contribution of Selected Economic Sectors to GDP, 2001-2005)



Source: This study, based on DANE.

4.5 International Comparisons (GVA and Employment)

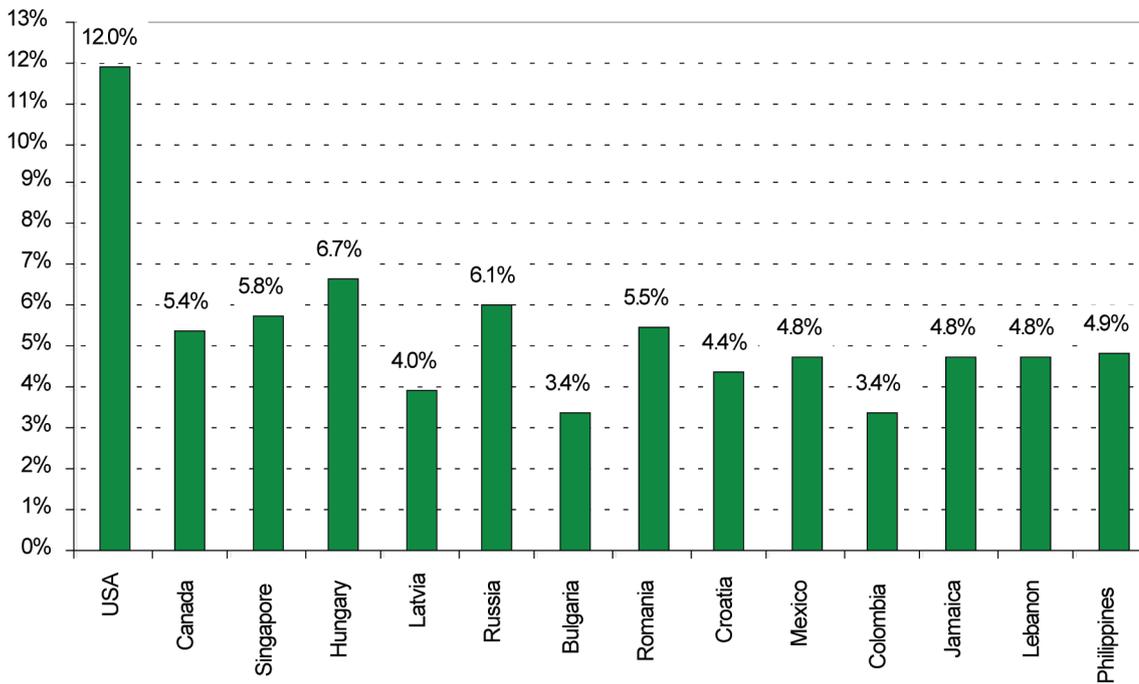
Recently, several similar studies have been carried out in different countries based on the WIPO Guide, which allows for country comparisons based on a common methodology. In view of this, comparisons are made between Colombia and other countries on the CBI contribution to GDP and to employment.

Chart 7 shows a comparison of the contribution of the CBI to GDP. As can be seen, the US makes the highest contribution at 12 per cent, followed by Hungary with almost 7 per cent. It should be noted that the US belongs to the group of countries with high GDP *per capita* and Hungary to those with average GDP *per capita*.²² Other countries with high percentages are Russia and Romania, which also belong to the average GDP *per capita* group, and Canada, which pertains to the top category of GDP *per capita*.

²² The GNI per capita and the classification of countries according to the level of this indicator (upper and middle), calculated according to the Atlas method of the World Bank.



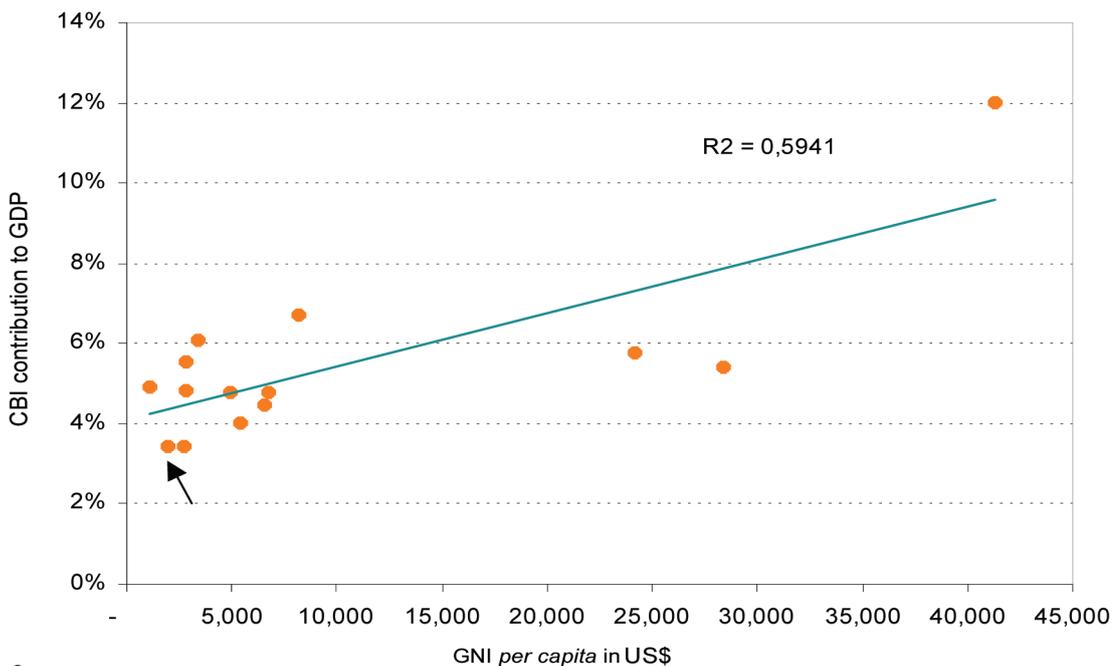
Chart 7. Selected Countries: CBI Contribution to GDP (recent years)



Source: This study, based on other WIPO studies.

A simple correlation exercise for the countries in the previous chart, between the GNI *per capita* and the CBI contribution to GDP, demonstrates a direct relation between these two indicators, that is to say, that high GDP *per capita* results in a high contribution by the CBI, as shown in Chart 8.²³ The arrow in the graph indicates the position of Colombia, which has the same share as Bulgaria but has lower GNI *per capita*.

Chart 8. Selected Countries: CBI Contribution to GDP vs. GNI *per capita* (recent years)



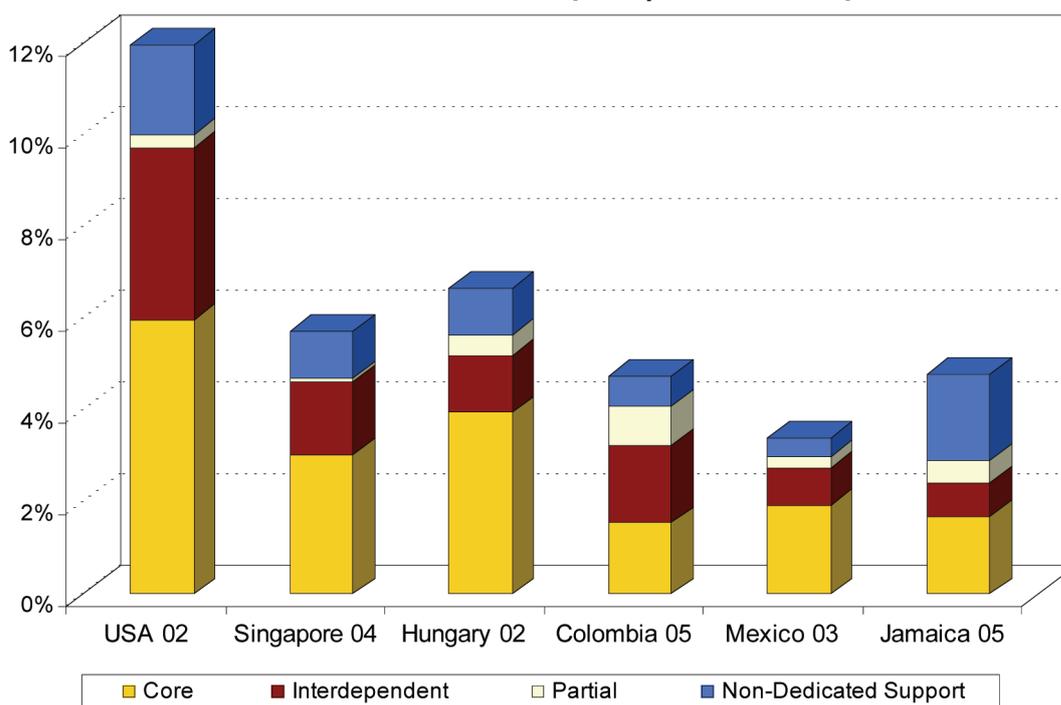
Sources:
This study, based on WIPO studies and World Bank statistics.

²³The R² is 0.59 in this exercise: however, if this is calculated using GNI per capita calculated according to the PPP (purchasing power parity) the coefficient is 0.56.

Finally, Chart 9 compares the contribution of the four CBI categories to GDP for the following countries: Colombia, Hungary, Jamaica, Mexico, Singapore and the US.

In countries with high GDP *per capita*, such as Hungary, Singapore and the US, 50 per cent or more of the CBI correspond to the core industries, with Hungary in the lead with 59 per cent. In Colombia, the contribution of this group is high (57 per cent), and in other countries with average GDP *per capita*, such as Jamaica and Mexico, this share is about 33 per cent.

Chart 9. Selected Countries: CBI Contribution by Group to GDP (recent years)



Source: This study, based on WIPO studies.

4.6 CBI Structure

The following section presents an analysis of the economic contribution of the different CBI groups, emphasizing their structure and evolution during the period 2000-2005.

4.6.1 Core Industries

In 2005, the core industries generated Col\$5.330.000 million, which represented 1.9 per cent of Colombian GDP. The core activities consist of 25 sectors (ISIC revision 3 in four digits), of which publication of newspapers, journals and periodicals represent 17.3 per cent of the total value generated by this group. In order of importance, this is followed by radio and television with 15.2 per cent, printing services at 13.7 per cent, retail sales in specialty shops at 8.4 per cent, and information technology at 7.6 per cent. These activities account for 62 per cent of the total value of the core industries while the remaining 38 per cent is distributed among the 20 other sectors as shown in Table 17.

This distribution contrasts with that of Hungary (Penygey and Munkácsi, 2005), where the software and database industries, together with press and literature, represented 64 per cent of the total core activities in 2002. In Mexico in 2003, press and literature, radio and television registered 61 per cent of this core group (Márquez-Mees, Ruiz and Yaber, 2006).

Table 17. Value Added Composition of the Core Industries, 2000-2005

		2000	2001	2002	2003	2004	2005
	Sub Total Core Industries	100	100	100	100	100	100
2211	Publishing of books, brochures and other publications	9.6	9.8	8.7	8.1	5.1	4.5
2212	Publishing of newspapers, journals, and periodicals	17.7	18.2	18.5	17.6	18.2	17.3
2213	Music publishing	1.1	1.1	0.9	1.1	0.6	0.5
2219	Other publishing	0.6	0.6	0.5	0.4	0.2	0.1
2220	Printing	9.4	9.6	8.8	12.1	15.1	13.7
2231	Art, design and composition	0.0	0.0	0.0	0.1	0.1	0.1
2232	Photo mechanic and related services	0.2	0.2	0.2	0.3	0.4	0.4
2233	Binding of printed sheets	0.1	0.1	0.1	0.0	0.0	0.0
2234	Finishing and laminating	0.0	0.0	0.1	0.1	0.1	0.1
2239	Other publishing related services n.e.c.	1.5	1.5	0.6	0.7	0.4	0.8
5239	Other retail sale in specialized stores	6.5	6.9	8.2	7.9	7.7	8.4
7210	Consultancy on IT systems	1.5	1.7	2.8	1.8	1.2	2.2
7220	Production of IT software	6.9	7.2	5.4	6.0	7.1	7.6
7230	Data processing	1.3	1.2	1.5	1.4	1.2	2.3
7430	Advertising	5.8	4.9	6.5	7.3	7.6	7.3
7494	Photographic activities	1.9	1.4	1.6	1.6	1.5	1.8
9112	Activities of professional organizations	0.1	0.1	0.1	0.1	0.1	0.1
9211	Motion picture and video production and distribution	0.5	0.4	0.4	0.4	1.3	1.2
9212	Motion picture projection	1.7	1.9	2.3	1.6	1.2	1.6
9213	Radio and television activities	16.6	15.9	15.7	15.3	15.3	15.2
9214	Dramatic arts, music and other arts activities	7.9	8.0	7.7	7.4	7.2	6.7
9219	Other entertainment activities n.e.c.	1.1	1.0	1.4	1.2	0.9	1.2
9220	News agency activities	0.1	0.1	0.1	0.1	0.1	0.1
9231	Library and archive activities	0.2	0.2	0.2	0.2	0.2	0.2%
9249	Other recreational activities	7.8	7.9	7.6	7.3	7.1	6.6%

Source: This study.

It is important to note that given the increase in the integration of activities on the part of companies, the figures presented in the previous table must be interpreted with caution, particularly concerning advertising activities, publication of newspapers, journals and periodicals and communication media, in which the operational incomes of the companies originate from activities which correspond to different sectors.

For example, newspapers, journals and periodicals generate a good proportion of their income from the sale of advertising and not only from the sale of the newspapers, journals and periodicals themselves. In addition, the inclusion of electronic media such as web pages is changing the way companies work and earn their income.

Advertising

On the advertising side, important changes have likewise occurred in recent years. Among those worth mentioning are the emergence of dedicated media centers, the change in advertising strategy and the search for alternative channels to reach clients, which have changed advertising activities. Until recently, the approach was more focused toward mass communication. Today, however, strategies are much more segmented to seek out more specialized markets and produce a more effective strategy.

One of the important changes in this business relates to the selection of appropriate means adapted to the objectives of every campaign or target market. Today, direct advertising using printed media (inserts), on-site campaigns (large areas and supermarket chains), the Internet and other innovative methods have led to substantial changes in this activity.

On the other hand, the opening of economies and free trade agreements are forcing local companies to strengthen their image and brands to face increasingly aggressive competition. This has led to major investment in advertising activities in order to maintain their markets.

In the coming years, the expansion of digital services in all activities related to publication and media will continue to entail change and generate new challenges for the adequate quantification and monitoring of some CBI activities.

The advertising sector is composed of relatively few companies (28 in 2005) and has exhibited significant growth in the period covered, with their operational income more than doubling in these years. This growth is associated with the performance of the economy for this period and with the expansion in the telecommunication and information technology sectors.

Television and Radio

The television and radio sectors have likewise shown a positive performance in the period studied. This sector has undergone major change, consolidation of two existing private television channels (Caracol and RCN), and an internationalization process through the establishment of affiliations with multinational companies (Telemundo, Univisión, Globo Television), which has converted Colombia into an exporter of content for the Latin-American and the Spanish-speaking market in the US. The companies mentioned, in addition to being proprietors of two existing private channels, are two of the biggest television producers, who, together with RTI and TELESET, form part of the top companies producing and exporting these types of products.

This activity will also see important changes in the coming years, given that the bidding process to increase the number of private channels in the country has started.

On the other hand, television companies by subscription or cable have shown dynamic growth in the last decade. It is estimated that for 2007, there were 1.6 million subscribers in Colombia, according to figures from the National Commission on Television, with a growth rate close to 300,000 in the past year.²⁴ The reason for this growth is the entry in the national market of the multinational TELMEX, which has acquired major companies in Colombia and has increased the additional services offered by these companies (Internet, information and telephony). Moreover, another Spanish multinational company, TELEFONICA, which acquired the government-owned TELECOM, began to compete in the market, generating price decreases and increasing the number and quality of the services offered. As a result, and in order to challenge competition from these multinationals, the other companies have responded by expanding their coverage and services that are protected by regulatory instruments, which seek to avoid a market monopoly.

In general, the entire telecommunication and information technology sector in Colombia, as in the rest of the world, has been one of the more dynamic sectors in recent years not only because of new technological developments, but also because of changes in the regulations, the increase in the privatization process, the participation of foreign capital investment and the increase in the use of these new technologies.

Publishing and Printing

The publishing and printing sectors are primarily composed of the following activities: publication of periodicals, publishing of books and printing. The first two activities are dominated by a small number of large companies (48 establishments in 2005) dedicated to the publication of major newspapers, journals and periodicals circulated nationally. Likewise, the book publishing and printing sector is made up of a small number of large companies (60 establishments in 2005), among others, the Carvajal Group, Panamericana, LEGIS and Editorial Planeta, capturing more than 70 per cent of the market.

Printing activities can be divided into two main groups of companies given their level of informality. On the one hand are the 170 major companies in 2005, including the Carvajal Group, which is the leading company in this sector in Colombia. Then there is the group composed of a large number of informal and small-scale enterprises.

The Computer Industry

There were 23 registered companies in the computer industry in 2005. In this group are representatives or subsidiaries of multinational companies such as UNYSYS, MICROSOFT, ORACLE, SAP, PEOPLE SOFT, among others. Most of the existing companies are dedicated to offering solutions to large and medium-scale companies and are not geared towards the mass market for household consumption. The computer industry market is characterized by the increase in consultancy services in information technology and by the decrease in software development, a sector in which competition against the large multinationals has become difficult. Increasingly, fewer companies are dedicated to the development of software applications and in contrast there is a growing market for advisory or consultancy services for the implementation of platforms developed by the main companies to satisfy the needs of large and medium-sized enterprises. The local companies engaged in software development do not have the means to make economies of scale to underwrite the enormous investment required by the dynamics of information technology.

Specialized Trade

One of the key activities in the core industries is specialized trade, which is associated with the performance and penetration of new information technologies in Colombian households and companies. The main

²⁴Up to four years ago it was not known exactly how many people received paid television. While studies of media consumption estimate up to 76 per cent, advertisers calculate this at 65 per cent and official figures place it at 50 per cent of Colombian households (*El Tiempo*, February 18, 2008).

companies in this sector are dedicated to the sale of computers, electronic equipment for domestic use and software. This sector has experienced significant growth during the period studied, as explained by increased computer usage, and the widespread penetration of information technology. Likewise, the continued appreciation of the local currency has led to a decline in relative prices of imported goods and has therefore increased the demand for these goods. Also, the rapid rate of obsolescence in technology has made this one of the most dynamic activities in the CBI.

In this sector, it is also important to emphasize the results of efforts against smuggling, which have led to a significant change in the structure of specialized trade. Until a few years ago, a formal trade specializing in domestic electronic equipment and computers was non-existent. However, due to the liberalization of the market, smuggling of this type of product is very low.

In general, rapid technological change and the strong market penetration of new information technologies were identified as the major factors revitalizing the core industries within the CBI. In the future, technologies such as the Internet, wireless connectivity, the integration of services and the decrease in the relative prices of technological and access services will determine the pattern of development and integration of the core activities. Likewise, the new technologies will generate permanent challenges for the monitoring of legal and illegal activities and the development of new ways of doing business.

4.6.2 The Interdependent Industries

In the interdependent industries, the production of pulp, paper, articles of paper and paperboard represented more than 60 per cent of the value added generated in 2005, as shown in Table 18. This composition differs from that of other countries where the manufacture of electronic devices and computers enjoys a significant share in this category. In Colombia, this activity is very limited because most electronic devices are imported.²⁵

It should be noted that the pulp, paper and paperboard production industry comprises 10 firms. In 2005, two of the firms in this group generated 81 per cent of the operational income of this industry: Propal (using sugar-cane fiber) and Carton de Colombia. The latter has a 70 per cent share in the group Smurfit Kappa, which is one of the largest producers of paper packaging and recycling in the world. The proportion of pulp (chemical wood pulp) is approximately 10 per cent of the total of this ISIC classification and this was not modified between 1997 and 2004.

In this group of industries, there is a difference in composition in Colombia compared with other countries like Mexico, where the production of electronic equipment and computers represents 66 per cent of the value added of the interdependent industries. In contrast, in Colombia, these activities have a share of less than two per cent. This wide difference originates from the slack development of these activities in the country, which explains the behavior of external trade in this type of product, Colombia being a net importer.

²⁵ For example, in Mexico in 2003, computers and equipment represented 66 per cent of this group (Márquez-Mees, Ruiz and Jaber, 2006), which is similar to Hungary in 2002, where the manufacture of computers and equipment, TVs and radios accounted for 89 per cent of the group (Penygey and Munkácsi, 2005).

Table 18. Value Added Composition of the Interdependent Industries, 2000-2005

		2000	2001	2002	2003	2004	2005
ISIC	<i>Interdependent Industries</i>	100	100	100	100	100	100
2101	Manufacture of pulp, paper and paperboard	41.6	42.8	40.3	40.3	39.6	38.0
2109	Manufacture of other articles of paper and paperboard	27.9	24.9	25.0	27.3	26.8	25.5
2429	Manufacture of other chemical products n.e.c	18.3	18.6	19.6	18.3	18.0	16.8
3210	Manufacture of capacitors except fixed and variable electronic capacitors	0.2	0.3	0.2	0.2	0.2	0.2
3220	Manufacture of television and radio transmitters and apparatus for line telephony and line telegraphy	0.9	1.3	1.3	1.1	1.4	1.2
3230	Manufacture of television and radio receivers, sound or video recording or reproducing apparatus, and associated goods	1.5	2.1	2.5	2.2	2.2	2.3
3320	Manufacture of optical instruments and photographic equipment	0.7	1.0	1.0	0.8	0.7	0.8
3692	Manufacture of musical instruments	0.0	0.0	0.0	0.0	0.0	0.0
5237	Retail sale of records, musical instruments and other household appliances and equipment	1.0	1.1	1.2	1.1	1.4	1.6
5244	Retail sale of books, newspapers, magazines, office supplies in specialized stores	7.5	7.8	8.6	8.1	8.3	11.4
7123	Renting of office machinery and equipment (including computers)	0.4	0.3	0.2	0.5	1.3	2.3

Source: *This study.*

In part, the absence of the electronic equipment industry explains the minor role of the CBI in the total value added of the country, in contrast to that of other countries, where this activity is highly relevant.

4.6.3 Partial Industries

The most important partial industries in terms of the generation of value added are the manufacture of fabricated metal products, manufacture of textiles and wooden articles. Of the entire value added of the partial industries, 70 per cent is concentrated on these three industries, as shown in Table 19. The activities are generally associated with small-scale enterprises and the informal sector, which plays an important role in the generation of employment.

Table 19. Value Added Composition of the Partial Industries, 2000-2005

		2000	2001	2002	2003	2004	2005
ISIC	<i>Partial Industries</i>	100	100	100	100	100	100
1720	Manufacture of made-up textile articles	0.4	0.5	0.5	0.5	0.4	0.4
1750	Manufacture of knitted and crocheted fabrics and articles	27.4	27.4	24.1	23.8	24.7	25.9
1810	Manufacture of wearing apparel	1.1	1.4	1.4	1.4	1.4	1.3
1921	Manufacture of footwear with uppers of leather, other than sports footwear	0.1	0.1	0.1	0.1	0.1	0.1
1922	Manufacture of footwear with uppers of textile materials, other than sports footwear	0.0	0.0	0.0	0.0	0.0	0.0

		2000	2001	2002	2003	2004	2005
ISIC	Partial Industries	100	100	100	100	100	100
1923	Manufacture of footwear with outer soles and uppers of rubber, other than waterproof footwear, sports footwear	0.0	0.0	0.0	0.0	0.0	0.0
1924	Manufacture of footwear with outer soles and uppers of plastics, other than waterproof footwear, sports footwear	0.0	0.0	0.0	0.0	0.0	0.0
1925	Manufacture of sports footwear, except skating boots	0.1	0.1	0.1	0.1	0.2	0.3
1929	Manufacture of footwear n.e.c.	0.0	0.0	0.0	0.0	0.0	0.0
2020	Manufacture of other wood products	7.9	7.3	6.8	7.3	8.1	6.8
2030	Builders' joinery and carpentry	2.4	2.4	2.3	2.3	2.1	2.1
2040	Packing cases, boxes, crates, drums and similar wood packaging	1.0	1.0	1.0	1.0	0.9	0.9
2090	Other wood products; articles of cork plaiting materials and straw	16.3	16.3	16.1	16.0	14.8	14.5
2610	Manufacture of glass and glass products	0.3	0.4	0.4	0.4	0.3	0.3
2899	Manufacture of other fabricated metal products n.e.c.	27.2	26.8	28.7	30.4	29.2	29.3
3611	Manufacture of furniture for households	3.3	3.3	3.2	3.2	3.0	2.9
3612	Manufacture of furniture for offices	0.2	0.2	0.2	0.2	0.2	0.2
3613	Manufacture of furniture for trade and services	0.2	0.3	0.3	0.3	0.3	0.4
3619	Manufacture of other furniture n.e.c.	0.5	0.6	0.6	0.6	0.7	0.9
3691	Manufacture of jewelry and related articles	0.3	0.4	0.7	0.9	0.7	0.7
3694	Manufacture of games and toys	2.8	4.2	4.1	4.1	4.6	4.2
7421	Architectural and engineering activities and related technical consultancy	4.1	3.2	4.3	3.6	4.4	4.6
7499	Other business activities n.e.c. (translation and interpretation)	2.4	2.2	3.3	2.0	2.2	2.5
9232	Museum activities and preservation of historical sites and buildings	1.8	1.8	1.7	1.7	1.6	1.5

Source: This study.

4.6.4 Non-Dedicated Support Industries

In the non-dedicated support industries, as expected, trade is the main activity in the generation of value added, accounting for 45 per cent of the total, and transport with 37 per cent (Table 20). In Mexico, these percentages are 43 per cent and 27 per cent, respectively (Márquez-Mees, Ruiz and Yaber, 2006), and in Hungary, 58 per cent and 42 per cent, respectively, although the latter includes communications (Penygey and Munkácsi, 2005).

Table 20. Value Added Composition of Non-Dedicated Support Industries, 2000-2005

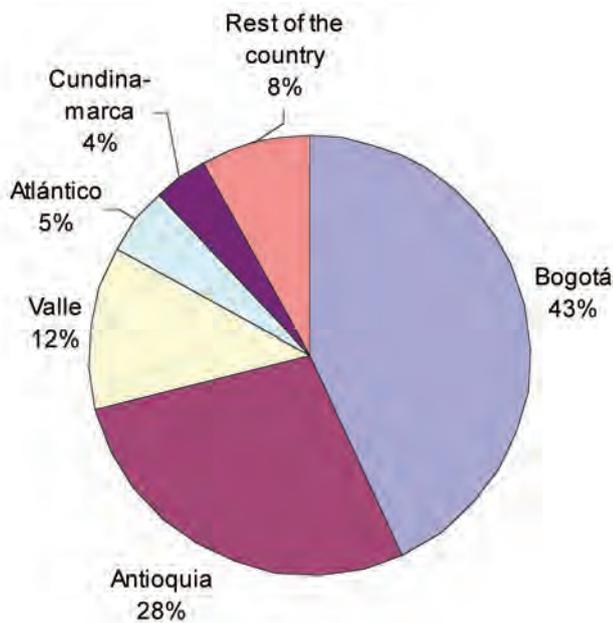
		2000	2001	2002	2003	2004	2005
ISIC	<i>Non-Dedicated Support Industries</i>	100	100	100	100	100	100
5119	Wholesale on a fee or contract basis of products n.e.c.	0.0	0.0	0.0	0.0	0.1	0.2
5131	Wholesale of textiles, clothing and footwear	6.5	6.3	5.6	5.6	4.5	4.3
5132	Wholesale of clothing and fur articles	0.7	0.7	0.5	0.4	0.6	0.8
5133	Wholesale of footwear	0.6	0.7	1.4	0.8	0.6	0.7
5134	Wholesale of electronic and telecommunication parts and equipment	3.4	4.3	5.2	6.1	5.5	5.2
5137	Wholesale of paper and paperboard and their products	1.7	2.0	1.7	1.9	1.7	1.6
5139	Wholesale of other household goods	3.6	3.1	3.1	2.9	2.3	2.1
5154	Wholesale of textile fibers	0.0	0.0	0.0	0.0	0.3	0.2
5159	Wholesale of other intermediate products, waste and scrap	0.1	0.0	0.0	0.0	0.0	0.1
5163	Wholesale of office, accounting and computing machinery	6.7	5.8	5.0	7.5	4.4	4.2
5190	Other wholesale	36.2	34.0	32.5	26.3	27.1	26.0
6041	Local freight transport by road	0.9	1.0	0.9	0.9	0.9	0.7
6042	Interurban freight transport by road	1.1	1.2	1.1	1.0	1.0	0.9
6043	International freight transport by road	0.0	0.0	0.0	0.0	0.0	0.0
6111	International water transport	2.6	2.4	2.3	2.4	3.0	2.3
6112	Coastal water transport	1.4	1.4	1.3	1.3	1.6	1.3
6120	Inland water transport	2.9	2.7	2.6	2.6	3.3	2.6
6212	National freight air transport	0.1	0.1	0.1	0.1	0.1	0.1
6214	International freight air transport	1.1	1.2	1.1	1.1	1.2	1.1
6310	Cargo handling	13.3	15.9	14.8	15.0	15.2	13.8
6320	Storage and warehousing	2.8	2.4	2.4	2.7	2.8	3.6
6390	Activities of other transport agencies	6.1	4.0	6.7	7.3	9.8	10.6
6411	National post activities	0.0	0.0	0.0	0.0	0.0	0.0
6412	Courier activities other than national post activities	0.1	0.1	0.0	0.0	0.0	0.1
6421	Telephone services	2.7	4.1	5.7	3.5	1.0	0.6
6422	Network data transmission	1.0	1.3	1.4	2.4	1.2	1.3
6423	Radio and television transmission on a fee or contract basis	0.4	0.4	0.4	0.1	0.4	0.1
6424	Wired telecommunication carriers	0.0	0.2	0.3	0.6	0.5	0.6
6425	Other telecommunication services	2.6	3.0	2.8	5.7	9.0	10.8
6426	Telecommunication-related services	1.0	1.9	1.0	1.5	1.4	1.3
7240	Database activities and online distribution of electronic content	0.2	0.0	0.2	0.2	0.4	2.7

Source: This study.

4.7 Regional Structure of CBI Gross Value Added

Colombia is a country characterized by wide regional diversity resulting in the relative isolation of the different regions due to their terrain, geography and history. This section provides a brief description of the regional distribution of the GVA of the CBI. Colombia is divided into 32 departments and a capital district (Bogotá). However, four territorial sections contribute 88 per cent of the GVA generated by the CBI: Bogotá (43 per cent), Antioquia (28 per cent), Valle (12 per cent) and the Atlántico (5 per cent), as shown in Chart 10. In the core industries, there is a major concentration in these areas, with Bogotá representing 71 per cent of the value added, followed by Antioquia 6 per cent, Atlántico 8 per cent and Valle 10 per cent.

Chart 10. Regional Distribution of GVA of the CBI, 2001-2005



Sources: This study, based on the Annual Manufacturing Survey of the DANE and Superintendency of Companies.

The concentration of the CBI activities is partly explained by the existence of the four largest metropolitan areas of the country (Bogota, Medellin, Cali and Barranquilla), which, altogether account for almost half of the population. Likewise, the CBI are associated with urban activities and their markets are associated with higher income regions.

Likewise, in the main cities, there is greater access to information technology and a major concentration of human resources, which form the basis for the development of this type of activity.

5. Employment Generation in the CBI

The process of production, distribution, trade and consumption of cultural goods and services involves multiple agents filling the diverse roles. As a result, the copyright-based industries represent an important source of employment for creators, performers, businessmen, employees and independent workers in manufacturing, industrial, media, wholesale and retail trade firms, advertising agencies, cultural institutions, etc. These employment possibilities extend to those involved in activities providing support and assistance to the different service links in the value chain.

To measure the CBI contribution to national and urban employment (since these activities are concentrated in the main cities) this study, following WIPO's methodological guidelines, considers employment from all CBI activities, i.e. the core, interdependent, partial and non-dedicated support industries.

5.1. Source of Information

The presence of diverse agents involved directly or indirectly in the CBI is a demonstration of the social division of labor in cultural production and can be captured through different collection methods designed and implemented by Colombia's National Statistics Department (DANE) and the private sector.

5.1.1. Household Surveys

The principal source of information for measuring the contribution of the CBI in employment is the Household Surveys conducted by the DANE. The main limitations of this source are: i) constant methodological changes since 2000 which impede comparisons; ii) the disaggregation of economic activities at four-digit ISIC only began in 2003; iii) the DANE's statistical reserve policy, which initially included only the Annual Manufacturing Survey and now covers the entire database, hindering the release of micro data to researchers. Researchers only receive the final tables but it is the DANE which processes the information. This phenomenon has caused a huge debate in the country.

In 2000, the DANE implemented a significant change in the methodology of household surveys. This change was consolidated during the second quarter of 2001 when a new system known as Continuous Household Survey (CHS) was implemented. Starting in 2003, the CHS included the economic activities at four digits. This explains why this study can calculate employment in the CBI for the period 2003-2006 only.

The general objective of the CHS is to provide basic information on the size and structure of the labor force (employment, unemployment) and allow the quantification of employment in the formal and informal sectors and of some socio-demographic variables in the country. The survey does not include the population of new departments (the 1991 Constitution), where approximately 4 per cent of the total population resides and whose occupations are mainly of a rural nature.

The other limitation in the household survey is that it does not allow the quantification of employment in copyright activities based on the international standard classification of occupations adopted for Colombia (ISCO-88), such as for composers, singers, musicians, writers, photographers, etc.²⁶ In addition, an alternative quantitative approximation of employment through the information provided by social security institutions is limited by the fact that half the people employed in Colombia are not affiliated to pension or health insurance schemes.

²⁶The ISCO-88 is a technical instrument which describes the occupational structure of the country, based on the selection of jobs with similar tasks and characteristics to form the most representative occupations.

5.1.2. Annual Manufacturing Survey

For industrial activities, the Annual Manufacturing Survey was used but this only covers establishments employing 10 or more people. Therefore, all the informal enterprises (micro-enterprises) are excluded from this survey. This is an important constraint since 14 per cent of the informal sector workers are employed in the industry.

5.1.3. Secondary Sources

Finally, to refine the data, other sources of information such as firms' surveys (Association of Business Chambers and Chambers of Commerce) and studies on different sectors conducted by business trade organizations were utilized.

5.2. Some Characteristics of the Colombian Labor Market

According to the CHS, the country's population in 2006 was 45.2 million, with 74 per cent living in urban areas. In Colombia, social work is carried out by 18.8 million workers.

In June 2006, the CHS results showed that the labor force participation rate in the country was 60.9 per cent, similar to the rate for the same period in 2003. In contrast, the employment rate was 54.2 per cent, higher by two percentage points than that registered three years earlier.

Table 21. Labor Market Indicators

	2003	2004	2005	2006
Percentages				
Working age population	75.9	76.3	76.6	77.0
Labor force participation rate	60.9	59.6	58.9	60.5
Employment rate	52.2	51.2	52.1	54.2
Unemployment rate	14.2	14.1	11.4	10.5
Population (thousands)				
Total population	43,104	43,832	44,545	45,234
Working age population	32,725	33,436	34,139	34,819
Economically active population	19,932	19,937	20,095	21,060
Employed	17,096	17,133	17,797	18,857
Unemployed	2,836	2,804	2,297	2,203

Source: Continuous Household Survey for June 2001-2006, DANE.

The period of analysis is characterized by continuous growth in employment, leading to the creation of 1.8 million jobs (representing an accumulated figure of 9.5 per cent), 53 per cent of which were generated in the 13 major cities and metropolitan areas.

Table 22. Total National Employment

	2003	2004	2005	2006
Total	17,096,466	17,133,258	17,797,397	18,857,125
Employment in 13 cities and their metropolitan areas	7,721,525	7,720,228	8,137,200	8,665,391

Source: Continuous Household Survey, Colombia's National Statistics Department.

At the national level, 28 per cent of the total employed population is found in the rural sector and 72 per cent in urban areas. The distribution of this population according to the economic activity of firms where they are employed shows that in 2006 out of every 10 workers, six worked in the service sector. This sector together with the manufacturing industry which accounts for 14 per cent of the total employed population and construction with 5 per cent, cover almost the entire employment share of the country (79 per cent). The agriculture and livestock sector accounts for the balance of 21 per cent of total employment.

Table 23. Employment by Economic Activity, 2006

Economic Activity	Employment (Thousands)	Participation (%)
Total National Employment	18,857	100
Agriculture, hunting, forestry, fishing	3,995	21.2
Mining	241	1.3
Manufacturing	2,604	13.8
Electricity, gas, water	88	0.5
Construction	910	4.8
Wholesale, retail trade, restaurants and hotels	4,466	23.7
Transport, storage and communication	1,364	7.2
Financing, insurance, business and production services	215	1.1
Real estate activities	867	4.6
Community, social and personal services	4,106	21.8

Source: Continuous Household Survey, June 2006.

One of the characteristics of the labor market in Colombia is that 60 per cent of all jobs are unskilled, resulting in low productivity and low incomes. According to the results of the CHS as of June 2006, in the 13 metropolitan areas 58.5 per cent of the total employed population worked in the informal sector.²⁷ Of these, 47 per cent were self-employed workers and 30 per cent private laborers and employees in companies with fewer than 10 workers. The informal sector jobs are mainly concentrated in trade, restaurants and hotels (37.9 per cent), community, social and personal services (21.8 per cent) and industry (16 per cent).

Finally, it should be emphasized that during the period 2001-2006 the unemployment rate showed an accelerated reduction to 10.5 per cent in 2006, 4.6 percentage points lower than the rate registered for the same period in 2001. In actual numbers, this reduction meant that in five years there were 653,000 fewer unemployed people.

5.3. Employment in the CBI

In the following sections, the employment figures for the CBI for the period 2003-2006 based on the results of the CHS, and of some industrial activities based on the Annual Manufacturing Survey, are presented. The household being the source of information for the survey, data for formal and informal (self-employed and jobs at establishments with 10 or fewer employees) occupations are generated. Likewise, for partial industries and non-dedicated support industries, due to the high aggregation of economic activities as

²⁷ For the second quarter of 2006, there were 8.5 million workers in the 13 areas, of which 4,959,000 were in the informal sector and 3,520,000 were in the formal sector. Compared with the same period in 2005, the workers in the informal sector increased by 187,000 (3.9 per cent) while formal sector employment expanded by 163,000 (4.9 per cent).

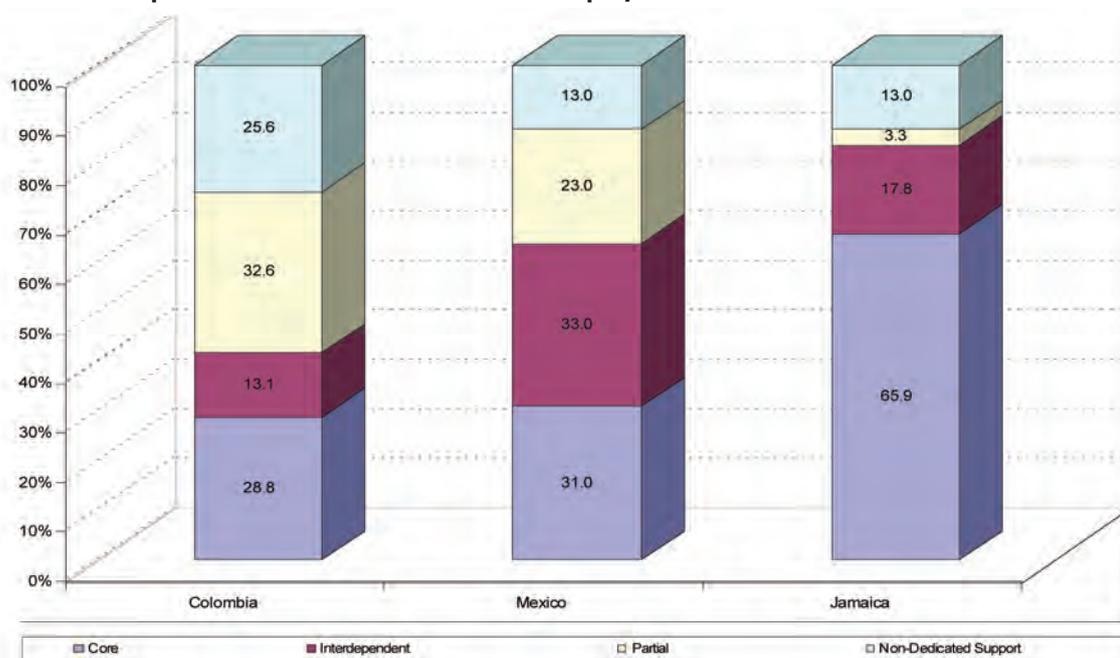
reported in the household survey (ISIS at four digits),²⁸ employment calculations were adjusted utilizing the same factors of share participation in the value added as described earlier.²⁹

In 2006, the CBI generated 1,097,430 jobs, representing 5.8 per cent of the working population and 12.7 per cent of the total employment in the 13 major cities. These figures show that the CBI make a higher contribution to national employment than traditional sectors such as construction, coffee and financial industries (Table 24).

In terms of the internal composition of CBI employment in 2006, the core contributed 29 per cent to the total and the interdependent industries contributed 12.8 per cent. Likewise, the partial industries accounted for the largest share of total employment at 32.1 per cent and the non-dedicated support industries also made a significant contribution at 25.7 per cent (Table 24).

The following chart shows the employment structures of the CBI in various countries, associated with the CBI contribution to the generation of value added.

Chart 11. Comparisons of the Distribution of CBI Employment



Source: This study, based on WIPO studies.

Table 24. Total CBI Employment (Numbers of Workers)

	2003	2004	2005	2006
Total	941,754	987,942	1,031,323	1,097,430
Core	270,850	289,573	301,299	321,846
Interdependent	123,521	128,684	132,471	140,606
Partial	306,544	318,997	332,873	352,426
Non-Dedicated Support	240,839	250,688	264,680	282,552

Source: This study.

²⁸ The basic question in the household survey to account for CBI employment was: "What is the main business of the company where you work?".

²⁹ Chapter 3, pp.36-39.

Table 25. Participation (%) of the CBI in Total National Employment

	2003	2004	2005	2006
Total	5.5	5.8	5.8	5.8
Core	1.6	1.7	1.7	1.7
Interdependent	0.7	0.8	0.7	0.7
Partial	1.8	1.9	1.9	1.9
Non-Dedicated Support	1.4	1.5	1.5	1.5

Source: This study.

Table 26. Distribution (%) of CBI Employment

	2003	2004	2005	2006
Total	100	100	100	100
Core	28.8	29.3	29.2	29.3
Interdependent	13.1	13.0	12.8	12.8
Partial	32.6	32.3	32.3	32.1
Non-Dedicated Support	25.6	25.4	25.7	25.7

Source: This study.

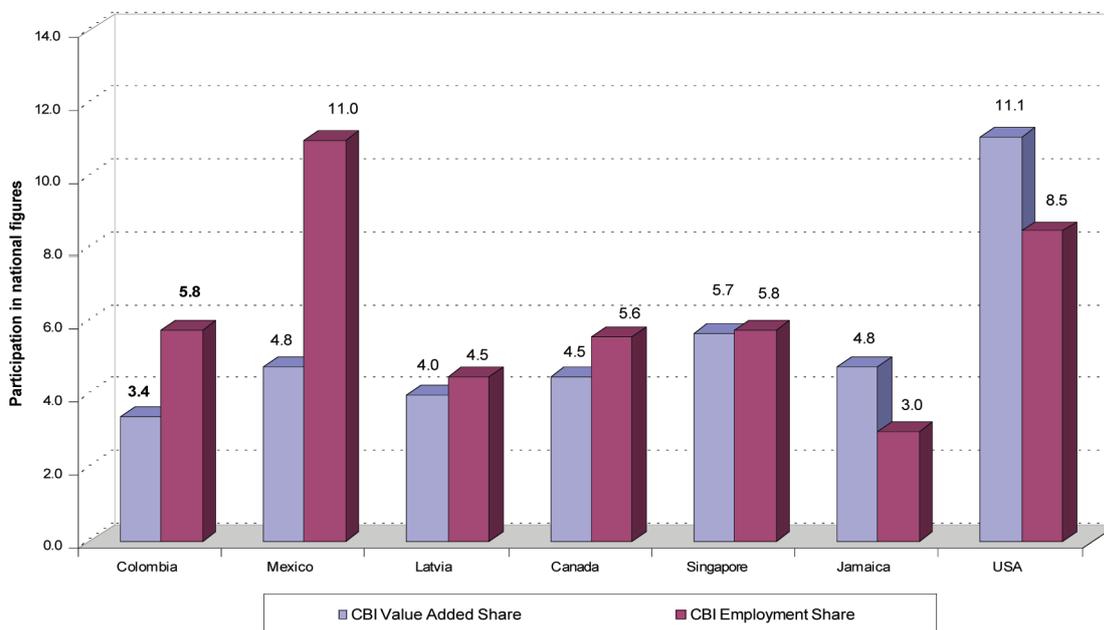
Table 27. Annual Growth (%) in CBI Employment

	2004	2005	2006
Total	4.9	4.4	6.4
Core	6.9	4.0	6.8
Interdependent	4.2	2.9	6.1
Partial	4.1	4.3	5.9
Non-Dedicated Support	4.1	5.6	6.8
Total National Employment	0.2	3.9	6.0

Source: This study.

The CBI participation in Colombia's total employment is lower than that of Mexico (11 per cent) and is similar to that of Canada and Singapore, at 5.6 per cent and 5.8 per cent respectively, although the CBI in these countries generate higher value added.

Chart 12. CBI Value Added and Employment Contribution in Selected Countries



Source: This study, based on WIPO studies and own calculations.

During the period 2003-2006, the CBI created 156,000 additional jobs, representing 8.8 per cent of all new jobs in the country and 16.5 per cent of the employment created in the 13 main cities and metropolitan areas. The accumulated growth during this period for CBI employment was 16.5 per cent, 6.2 and 4.3 percentage points higher than the accumulated growth rate for national employment at 10.3 per cent and for the 13 main cities at 12.2 per cent, respectively.

Table 28. Employment Creation during 2003 -2006

	Jobs Created
Total National Employment	1,760,659
13 main cities and their metropolitan areas	943,866
CBI	155,676

Source: This study.

Within the CBI, the main contributor to the generation of new jobs was the core group, which contributed 50,996 or 33 per cent of the total, i.e. four points higher than its relative participation in employment.

Table 29. Employment Creation by the CBI during 2003-2006

CBI	Jobs Created	Share
Total CBI	155,676	100
Core	50,996	33
Interdependent	17,085	11
Partial	45,882	29
Non-Dedicated Support	41,713	27

Source: This study.

In terms of the annual creation of employment, the CBI showed a stronger growth rate than the total economy during the three-year period of analysis (Table 30). However, compared with the growth rate of employment in the 13 main cities, the CBI growth rates were lower, except for 2004. During that year, while the country experienced zero growth in employment, the CBI achieved a growth rate of 5 per cent and the core group led with an increase of 7 per cent.

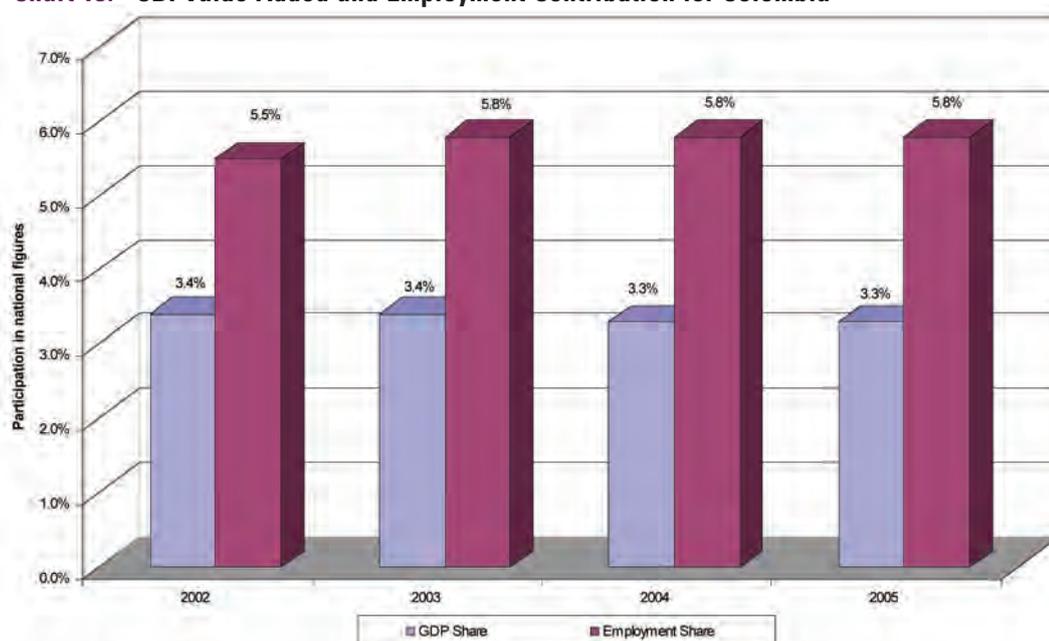
Table 30. CBI and National Employment Annual Growth Rates

	2004	2005	2006
Total National Employment	0.2	3.9	6.0
13 main cities and their metropolitan areas	0.0	5.4	6.5
CBI	4.9	4.4	6.4

Source: This study.

Unfortunately, the restricted employment series for this study do not allow a deeper analysis of the cyclical behavior of employment in the CBI. Chart 13 shows the correlation between the growth of value added and employment in the CBI, both characterized for their stability during the period 2002-2005.

Chart 13. CBI Value Added and Employment Contribution for Colombia



Source: This study, based on WIPO studies.

Finally, the relative productivity of workers in the CBI (compared with the average productivity of all workers which is equal to 1 in the different countries), registers the following values: 1.42 in the US; 1 in Latvia; 0.97 in Singapore and 0.94 in Hungary, among the high-income countries. In the middle-income countries, these figures are as follows: 0.43 in Mexico, 0.44 in the Philippines and 0.54 in Colombia. They show that only the relative productivity of the CBI in the US is higher than in the rest of the economy. This relative productivity is equal or slightly lower for Latvia, Singapore, and Hungary and lower in Mexico, the Philippines and Colombia, respectively.

6. The CBI in Colombia's Foreign Trade

6.1. Initial Considerations

Analysis of the external trade of the CBI shows the magnitude and the dynamism of the export and import markets and the foreign exchange net income generated for the country. Exports in general are an extension of the existing national market but imports represent competition to the domestic CBI and the consumption preferences in the national market.

6.2. Sources of Foreign Trade Information

Currently, the National Tax and Customs Office (DIAN) issues the foreign trade figures. The data is collected using standard formats designed for the purpose. In the case of exports and imports, these are registered using the NANDINA³⁰ Harmonized Tariff Code (eight-digit code) and follow the guidelines of the harmonized system. The exports are valued at FOB and the imports at CIF prices.

Although DIAN publishes the foreign trade figures to an aggregate level, the Central Bank and the National Statistics Department (DANE) process these data for their own purposes. In the case of DANE, aside from publishing aggregate figures, these transactions are also included in the national income accounts. On the other hand, the Central Bank uses and adjusts these data to include them in the balance of payments accounts and in the currency balance.

6.3. Structure and Trends of Colombia's Foreign Trade

The structure of Colombia's foreign trade has remained largely unaltered since the opening of the country's economy in the early 1990s. The non-factor goods and services account in the balance of payments shows that exports are mainly goods (89 per cent) and that a significant share of the service exports are linked to the foreign trade of goods. A similar pattern is observed for imports except that the share of services is higher (18 per cent).

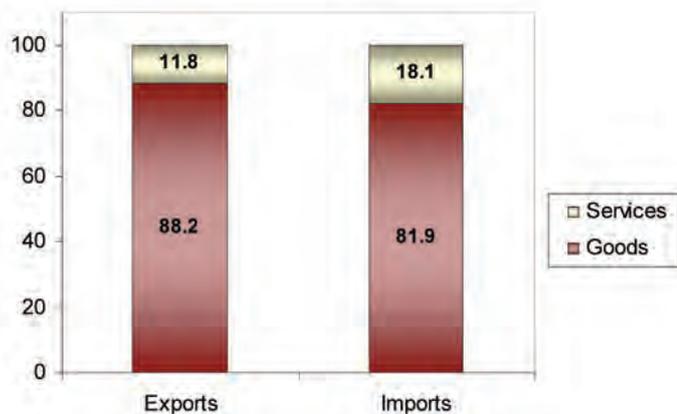
The supply of export goods is divided equally between traditional and non-traditional goods. Coffee, which had earlier been a main export product, now accounts for only 6 per cent, while mining accounts for 43 per cent of the total external sales (with petroleum at 26 per cent and coal at 12 per cent). The non-traditional exports are mainly industrial products (73 per cent). "Although the level of sophistication of Colombian industrial export products has increased over the last twenty years and is higher compared to that of Venezuela, Chile and Peru but these products are less sophisticated compared to the exports of countries like Brazil, Mexico and Malaysia".³¹ The basket of non-traditional goods is complemented by exports of the agriculture and livestock sectors (17 per cent, mainly flowers and bananas) and other mining products (9 per cent, especially gold and emeralds)

³⁰ Harmonized system adopted for ANDEAN member countries according to Decision 381 of 1995 of the Cartagena Agreement.

³¹ National Competitiveness Report 2007, the Private Council on Competitiveness, 2007.



Chart 14. Composition of Trade in Goods and Non-Factor Services

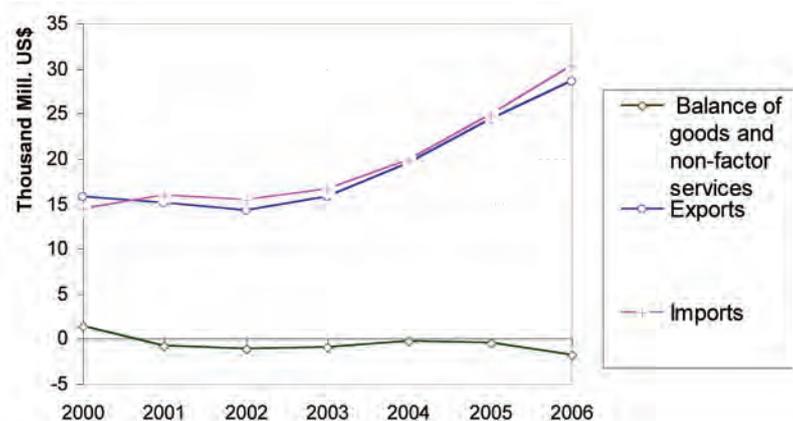


Source: This study.

On the other hand, 80 per cent of imports are comprised of intermediate goods (high level of chemical inputs) and capital goods (machines, vehicles and telecommunications) (44 per cent and 36 per cent, respectively). The balance is made up of consumer goods.

Finally, despite this consistent foreign trade performance in recent years, Colombia's trade balance has shown a favorable change in the last decade, due to the dynamism of the export sector. Exports grew by 9 per cent per annum during the period 1994-2006, while imports grew by 6.7 per cent per annum. During this same period, exports and imports of services showed a similar trend with an annual growth rate of 6.6 per cent. This has enabled the trade balance in goods to register a surplus since 1999 (balance of 322 million US dollars in 2006). However, the trade balance in non-factor services showed a deficit of 2,120 million US dollars in 2006 due to the fact that imports outperformed exports by a wide margin.

Chart 15. Balance of Payments of Goods and Non-Factor Services



Source: This study.

Table 31. Balance of Payments of Goods and Non-Factor Services

Millions of US dollars	2000	2001	2002	2003	2004	2005	2006
Goods and Non-Factor Services	1,374	-833	-1,197	-885	-334	-507	-1,798
Exports	15,771	15,038	14,183	15,733	19,479	24,393	28,554
Imports	14,397	15,871	15,380	16,618	19,813	24,900	30,352
A. Goods	2,633	579	239	555	1,346	1,595	322
1. General commerce	2,444	407	141	141	1,119	1,387	-47
i. Exports	13,099	12,233	11,794	12,933	16,442	20,818	23,930
ii. Imports FOB	10,655	11,826	11,653	12,792	15,324	19,431	23,976
2 Special foreign commercial transactions	189	172	97	414	227	208	368
i. Exports	624	615	522	879	782	911	1,251
ii. Imports	435	443	425	466	554	703	883
B. Non-Factor Services	-1,259	-1,412	-1,435	-1,439	-1,680	-2,102	-2,120
a. Exports	2,049	2,190	1,867	1,921	2,255	2,664	3,373
b. Imports	3,308	3,602	3,302	3,360	3,935	4,766	5,493

Source: *Balance of Payments, Central Bank.*

6.4. Foreign Trade in the CBI

It should be noted that traditional foreign trade statistics, not only in Colombia but worldwide, consider mainly goods (and in particular tradable goods), and in general do not take services into account. This limitation leads to the fact that registered statistics do not reflect the real value or in other words, they undervalue the scope of the CBI in some cases. For instance, the export of film (ISIC 9211 - production of films and video tapes) registers the sale of originals and copies of any production, but does not reflect the income per copy or exhibition rights generated in the foreign market. To ensure that such income is accounted for, it is necessary to create a system that periodically consults the firms that produce or trade these materials.

To quantify the foreign trade figures presented here, it was necessary to use a table to convert the NANDINA classification to the ISIC. Since the period of analysis covers the years 2000-2005 when some changes in the nomenclature were introduced, it is likely that these changes could affect the correlatives. However, evaluating the continuity of statistics, this phenomenon was unlikely to have affected the figures for the CBI.

An additional observation has to do with the globalization process, which has spread to many countries during the past decade. Under this scheme, "national" industries produce outside a country's borders; the most dramatic example being the dynamic growth that the Chinese economy has experienced. A significant number of foreign firms which have decided to locate to China to take advantage of what its economy offers are responsible for this growth. Although the production and external sales of these firms or industries are granted copyright protection in their country of origin (i.e. the US), it is impossible to take into account the sales of these figures in the national export statistics.

Table 32. Numbers of CBI Involved in Foreign Trade

Core	Interdependent	Partial	Non-Dedicated Support	Total
9	9	19	-	37

The figures indicate number of four-digit items.

Source: This study.

In 2005, CBI exports totaled 2,138 million US dollars and imports totaled 4,800 million US dollars. The net balance for the country shows that the value of imports is more than double that of exports. While CBI exports represented 16.7 per cent of the country's industrial exports and 10 per cent of total national exports, imports have a more substantial share (24 per cent and 22.6 per cent respectively).

This initial result indicates that the country is a net importer of CBI goods and services (2,200 million US dollars). However, this trade deficit is largely determined by imports of the interdependent industries. If only the trade transactions of the core industries are taken into account, the balance is positive, that is, the country is a net exporter of CBI goods and services. The following table shows the exports and imports of the CBI.

Table 33. Exports and Imports of the CBI, 2000-2005

Millions of US dollars

		Exports (FOB)					
		2000	2001	2002	2003	2004	2005
Core		172.4	212.6	189.7	188.1	218.8	232.8
Interdependent		226.6	282.9	283.5	327.6	392.8	433.5
Partial		903.6	987.0	950.1	1,033.4	1,377.4	1,471.5
Non-Dedicated Support		0.0	0.0	0.0	0.0	0.0	0.0
Total CBI		1,302.7	1,482.4	1,423.2	1,549.1	1,989.0	2,137.8
Total National		2000	2001	2002	2003	2004	2005
Total Exports		13,158	12,330	11,975	13,129	16,788	21,190
Industrial Sector		7,073	7,397	7,200	7,979	10,469	12,778
Participation of CBI in Total Exports (%)							
Total Exports		9.9	12.0	11.9	11.8	11.8	10.1
Industrial Sector		18.4	20.0	19.8	19.4	19.0	16.7
		Imports (CIF)					
		2000	2001	2002	2003	2004	2005
Core		117.1	178.9	106.7	102.4	109.4	131.2
Interdependent		1,844.0	1,962.7	2,032.7	2,330.1	2,641.9	3,804.7
Partial		597.1	621.6	611.4	591.1	733.9	864.5
Non-Dedicated Support		0.0	0.0	0.0	0.0	0.0	0.0
Total CBI		2,558.2	2,763.3	2,750.9	3,023.7	3,485.1	4,800.4
Total National		2000	2001	2002	2003	2004	2005
Total Imports		11,757	12,821	12,695	13,882	16,764	21,204
Industrial Sector		10,856	11,827	11,704	12,826	15,549	19,965
Participation of CBI in Total Imports (%)							
Total Imports		21.8	21.6	21.7	21.8	20.8	22.6
Industrial Sector		23.6	23.4	23.5	23.6	22.4	24.0

Source: This study is based on the trade figures from Colombia's National Statistics Department.

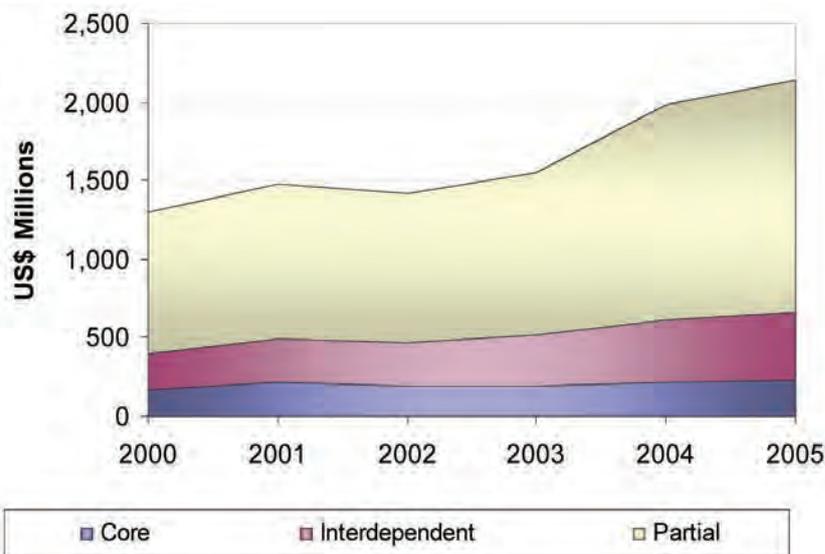
6.5. Exports

More than two-thirds of the value of the CBI exports during the period of analysis are concentrated in the partial copyright industries. While interdependent copyright industries account for 20 per cent, core industries account for 11 per cent of the total value of exports. On the other hand, the contribution of the non-dedicated support industries is zero, which is not surprising as the goods included in this sector are mainly non-tradable goods on the international market (local trade and transport or service activities).

It should be noted that the partial copyright industries include an important number of tradable items, mainly non-durable goods (textiles, clothing and shoes) but also durable products (furniture). The large share of these products in the consumer basket of goods clearly shows the importance of these products in trade. Likewise, it should be noted that it is not possible to separate the CBI component intrinsically involved in these activities, but it is obvious that all these activities demand CBI products, which is why the dynamism of these sectors increases the importance of the core industries. For their part, the interdependent industries somehow constitute the infrastructure for the development of the CBI; these include the sectors that produce machines, equipment and necessary inputs for the CBI or for their distribution.

The following chart shows the trend of CBI exports during the period 2000-2005 for the three groups of CBI that registered sales.

Chart 16. CBI Exports



Source: This study.

The exports of the core industries have grown at an annual rate of 6 per cent, reaching 232.8 million US dollars in 2005, a conservative rate when compared with the dynamic growth of industrial exports (13 per cent).

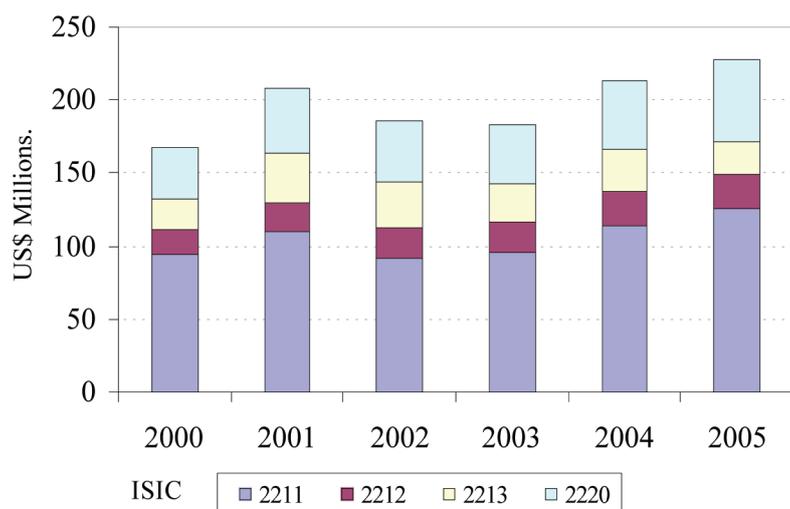
On the other hand, the external sales of the interdependent industries showed the best performance among the four groups, equivalent to an annual growth rate of 14 per cent, allowing these industries to surpass the exports of the core industries by almost 100 per cent in 2005, a far cry from 2000 figures when they only outperformed the core industries by 30 per cent. As will be shown in the following sections, this upward trend is explained by the importance of three sectors.

Finally, the partial copyright industries showed a commendable growth rate of 10 per cent and registered the major share of exports. This group includes products that are not only related to the core industries but

also serve as support for other industries, which explains why it is not possible in this study to separate the component in this industry related to the core industries. To do this requires the study of cases where the participation of the core industries in the wide spectrum of the partial copyright industries can be determined (such as the printing components, creative data processing component, or advertising).

6.5.1. CBI Exports by ISIC

Chart 17. Main Exports of the Core Industries



Source: This study.

The chart shows the core industries' main exports sectors and their evolution during the period of study. As expected, the publishing of books, brochures and other publications is the activity that has shown accelerated growth in recent years: foreign sales represent little more than 50 per cent of the total exports of this group.

Other activities that have also shown an upward trend and a significant value are: i) printing; ii) publishing of newspapers, journals, and periodicals; iii) music publishing.

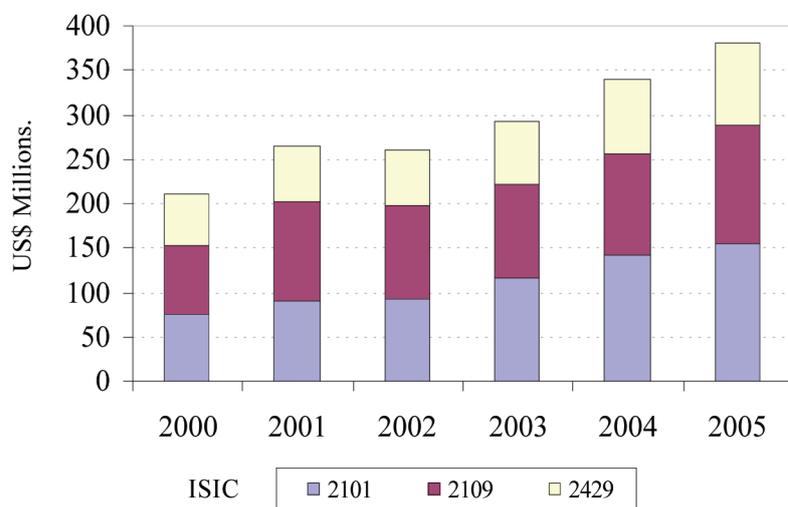
Table 34. Exports of the Core Industries

ISIC	Description	2000	2001	2002	2003	2004	2005
2211	Publishing of books, brochures and other publications	94.5	110.0	91.8	95.5	114.2	125.2
2212	Publishing of newspapers, journals, and periodicals	17.4	19.8	20.9	20.4	23.2	23.8
2213	Music publishing	19.9	33.3	31.3	27.2	28.8	22.9
2219	Other publishing	3.4	3.3	2.4	2.7	3.2	3.1
2220	Printing	35.5	44.8	41.3	40.3	47.3	56.1
2232	Photo mechanic and related	0.1	0.0	0.0	0.0	0.1	0.1
7494	Photographic activities	0.7	0.3	0.5	1.0	0.7	0.7
9211	Motion picture and video production and distribution	0.0	0.0	0.0	0.0	0.0	0.0
9214	Dramatic arts, music and other arts activities	1.0	1.0	1.6	0.9	1.3	0.9
Total		172.4	212.6	189.7	188.1	218.8	232.8

Source: This study.

In the interdependent industries, the major exports are from the following sectors: manufacture of pulp, paper and paperboard and the manufacture of other chemical products.

Chart 18. Main Exports of the Interdependent Industries



Source: This study.

Table 35. Exports of the Interdependent Industries

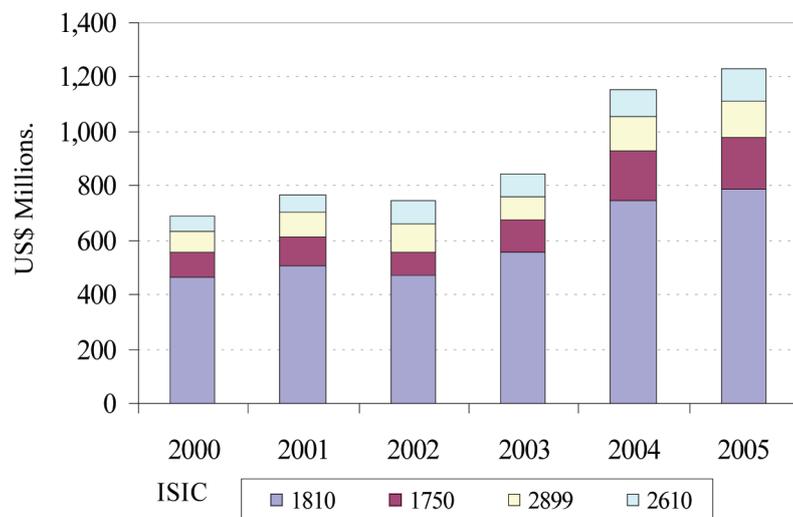
Millions of US dollars

ISIC	Description	2000	2001	2002	2003	2004	2005
2101	Manufacture of pulp, paper and paperboard	75.1	91.4	92.8	115.8	142.7	155.6
2109	Manufacture of other articles of paper and paperboard	77.3	111.5	105.0	106.1	113.2	132.2
2429	Manufacture of other chemical products n.e.c	58.4	60.8	62.2	69.6	84.9	91.8
3000	Manufacture of office, accounting and computing machinery	3.0	8.1	8.4	8.2	25.5	10.5
3210	Manufacture of capacitors except fixed and variable electronic capacitors	3.9	3.5	2.8	4.1	4.4	6.1
3220	Manufacture of television and radio transmitters and apparatus for line telephony and line telegraphy	7.4	5.1	5.3	8.5	6.0	23.6
3230	Manufacture of television and radio receivers, sound or video recording or reproducing apparatus and associated goods.	0.9	1.8	6.3	14.6	15.1	12.4
3320	Manufacture of optical instruments and photographic equipment	0.6	0.6	0.7	0.6	0.8	1.2
3692	Manufacture of musical instruments	0.1	0.1	0.1	0.1	0.1	0.1
Total		226.6	282.9	283.5	327.6	392.8	433.5

Source: This study.

Given the diversity and the wide scope of the partial industries, there are various sectors in this group that are more important than those of the core industries. For instance, the manufacture of textiles is predominant because of its volume of sales.

Chart 19. Main Exports of the Partial Industries



Source: This study.

Table 36. Exports of the Partial Industries

Millions of US dollars

ISIC	Description	2000	2001	2002	2003	2004	2005
1720	Manufacture of made-up textile articles	58.5	58.4	47.4	51.0	73.8	83.4
1750	Manufacture of knitted and crocheted fabrics and articles	88.0	103.9	85.2	117.1	184.7	188.3
1810	Manufacture of wearing apparel	466.1	508.0	472.9	556.6	746.8	790.3
1921	Manufacture of footwear with uppers of leather, other than sports footwear	2.3	2.2	2.1	1.7	2.6	2.9
1922	Manufacture of footwear with uppers of textile materials, other than sports footwear	0.0	0.2	0.1	0.0	0.1	0.1
1925	Manufacture of footwear with outer soles and uppers of rubber, other than waterproof footwear, sports footwear	3.7	2.4	1.4	0.7	0.8	0.5
1929	Manufacture of footwear with outer soles and uppers of plastics, other than waterproof footwear, sports footwear	0.0	0.0	0.0	0.0	0.0	0.0
2020	Manufacture of sports footwear, except skating boots	14.6	13.5	17.0	14.7	16.1	16.0
2030	Manufacture of footwear n.e.c.	10.9	10.0	5.8	4.0	5.2	7.4
2040	Manufacture of other wood products	0.1	0.5	0.3	0.5	1.1	1.3
2090	Builders' joinery and carpentry	5.5	6.4	2.8	2.3	6.4	4.3
2610	Packing cases, boxes, crates, drums and similar wood packaging	55.4	65.1	87.5	86.6	98.0	118.9
2899	Other wood products; articles of cork plaiting materials and straw	78.5	92.4	100.5	84.0	124.1	134.5
3611	Manufacture of glass and glass products	5.7	8.1	5.7	5.4	7.6	11.1

3612	Manufacture of other fabricated metal products n.e.c.	4.7	7.7	5.0	3.0	5.9	8.1
3619	Manufacture of furniture for households	0.0	0.1	0.7	0.4	0.1	0.0
3691	Manufacture of furniture for offices	101.9	99.3	105.5	94.2	90.0	89.4
3694	Manufacture of furniture for trade and services	7.6	8.7	10.2	11.1	14.0	14.8
7421	Manufacture of other furniture n.e.c.	0.0	0.0	0.0	0.0	0.0	0.1
Total		903.6	987.0	950.1	1,033.4	1,377.4	1,471.5

Source: This study.

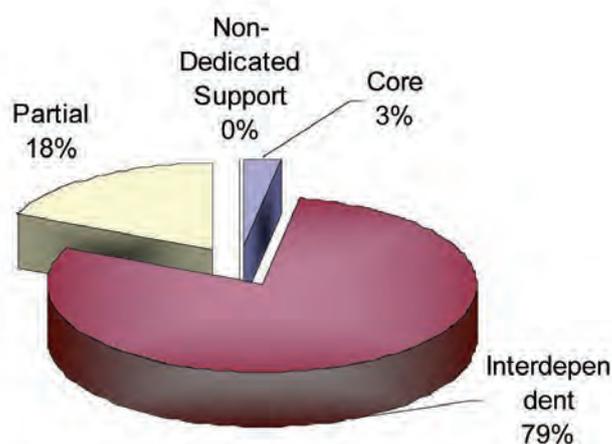
Finally, it should be noted that foreign sales of the non-dedicated support industries are practically zero.

6.6. Imports

The imports of CBI products complement the productive structure of the domestic market, because they cover the deficiencies of the market in some sectors. Given the characteristics of these imports, they are not considered as competing with domestic production, instead they support the local production activities of the CBI.

The imports of the interdependent industries are notable in that they contribute almost 80 per cent of the total value of the CBI imports.

Chart 20. Composition of the CBI Imports, 2005



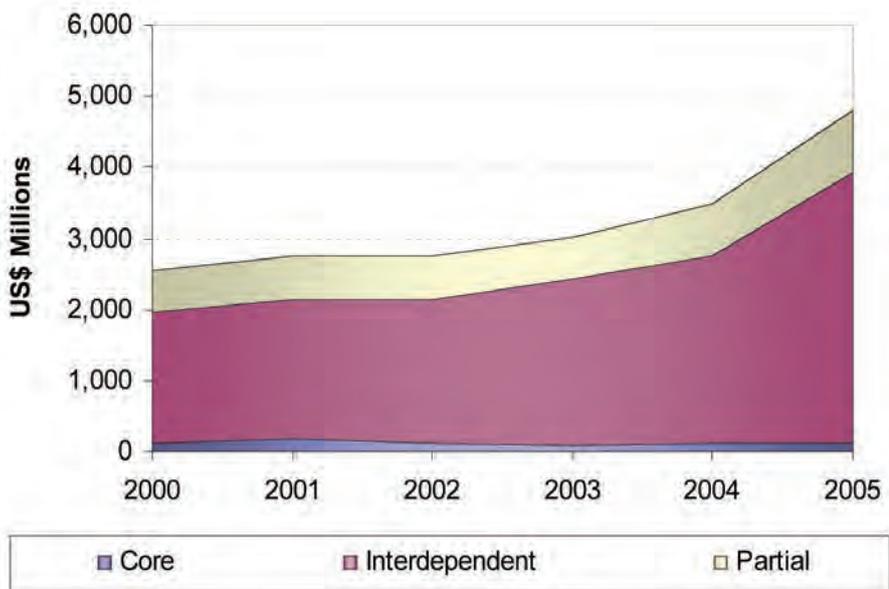
Source: This study.

The products in this group constitute part of the copyright output (such as raw materials for publishing) or involvement in their diffusion (such as TV and radio receivers).

On the other hand, the core industries show a reduced share of imports, which confirms the uncompetitive nature of legal imports of this group with the local industry, thus constituting a mechanism of "natural protection", since there are restrictions on the import of these goods and services.

Both the interdependent and partial copyright industries have shown an increasing trend since 2000 but, from the beginning of 2005, this tendency has become even more noticeable enabling these two groups to reach 4,600 million US dollars' worth of imports.

Chart 21. CBI Imports

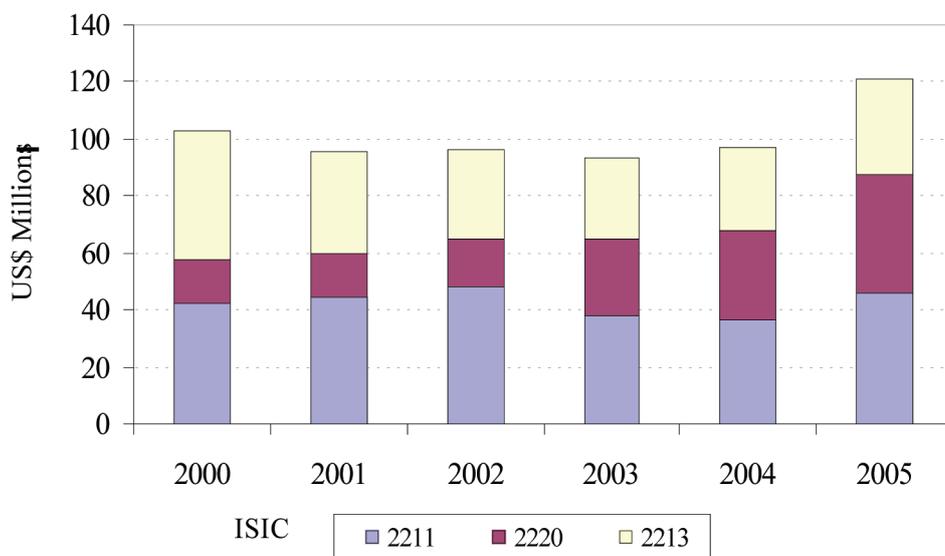


Source: This study.

6.6.1. CBI Imports by ISIC

The main products imported by the core industry (which are not in competition with local production since they are different from the national goods) are similar to those exported by this group, but they have a lower value (only 56 per cent of core industry exports), thus allowing this sector to show a positive trade balance.

Chart 22. Main Imports of the Core Industries



Source: This study.

Table 37. Imports of the Core Industries

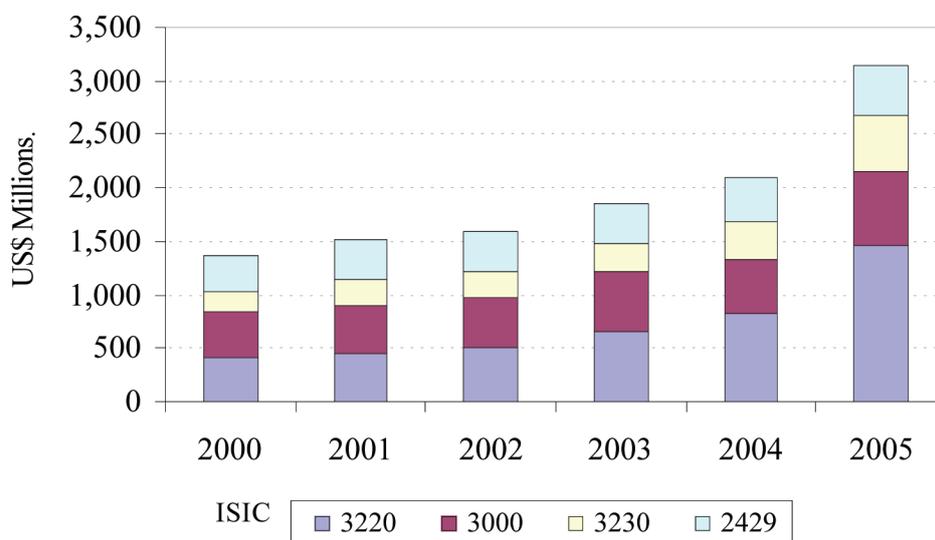
Millions of US dollars

ISIC	Description	2000	2001	2002	2003	2004	2005
2211	Publishing of books, brochures and other publications	42.5	44.2	48.0	37.9	36.4	45.6
2212	Publishing of newspapers, journals and periodicals	9.7	7.4	6.1	5.3	5.0	5.0
2213	Music publishing	45.5	35.2	31.6	28.7	29.0	33.6
2219	Other publishing	1.2	0.9	2.0	0.8	1.6	1.4
2220	Printing	15.2	15.9	16.5	26.7	31.3	42.1
2232	Art, design and composition	1.2	1.2	1.0	1.3	1.5	1.7
7494	Photo mechanic and related services	0.6	1.5	0.5	0.6	0.7	0.7
9211	Binding of printed sheets	0.4	0.4	0.4	0.5	0.5	0.6
9214	Finishing and laminating	0.8	72.2	0.5	0.5	3.4	0.5
Total		117.1	178.9	106.7	102.4	109.4	131.2

Source: This study.

The imports of the interdependent industries represent the highest values and have shown very dynamic trends, specially imports of television and radio transmitters and apparatus for line telephony and line telegraphy (3220); office, accounting, and computing machinery (3000); television and radio receivers, sound or video recording or reproducing apparatus, and associated goods (3230). All of these articles are used for reproducing what is produced by the core industries.

Chart 23. Main Imports of the Interdependent Industries



Source: This study.



Table 38. Imports of the Interdependent Industries

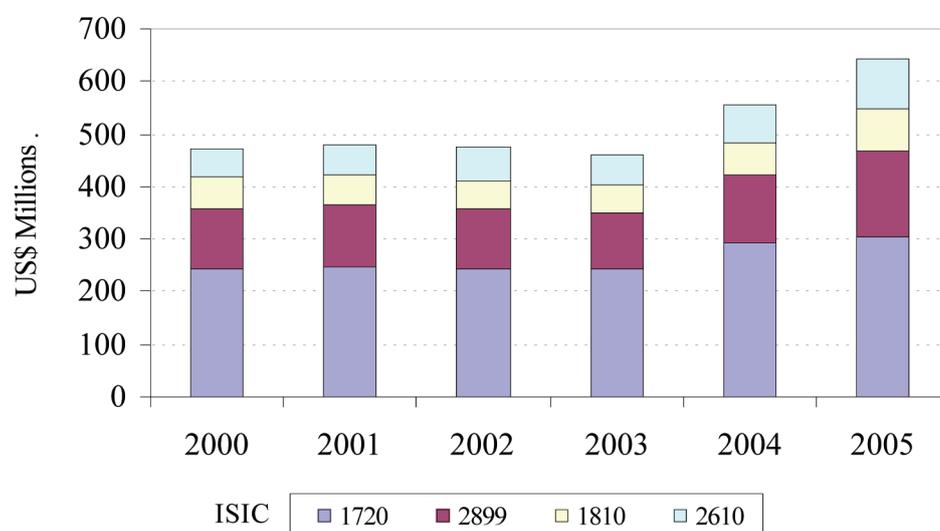
Millions of US dollars

ISIC	Description	2000	2001	2002	2003	2004	2005
2101	Manufacture of pulp, paper and paperboard	351.9	328.8	321.0	336.2	384.8	443.8
2109	Manufacture of other articles of paper and paperboard	39.1	34.5	38.1	40.6	41.0	41.6
2429	Manufacture of other chemical products n.e.c	341.8	360.2	364.6	387.2	421.8	480.4
3000	Manufacture of office, accounting and computing machinery	426.2	447.8	461.5	563.7	512.7	690.6
3210	Manufacture of capacitors except fixed and variable electronic capacitors	38.3	44.1	36.5	37.6	54.9	97.0
3220	Manufacture of television and radio transmitters and apparatus for line telephony and line telegraphy	420.4	442.8	503.5	656.5	820.6	1,461.4
3230	Manufacture of television and radio receivers, sound or video recording or reproducing apparatus and associated goods	176.9	257.2	253.3	251.0	348.2	517.7
3320	Manufacture of optical instruments and photographic equipment	44.5	42.7	49.4	51.6	52.8	65.0
3692	Manufacture of musical instruments	4.9	4.8	4.9	5.6	5.1	7.3
Total		1,844	1,963	2,033	2,330	2,642	3,805

Source: This study.

On the other hand, the imports of the partial industries include a wide range of articles which are not only required by the core industries but also by other sectors. In fact the two main imports of this group do not seem to have close connections with the core industries except for aspects related to design and ownership rights of certain production processes.

Chart 24. Main Imports of the Partial Industries



Source: This study.

Table 39. Imports of the Partial Industries

Millions of US dollars

ISIC	Description	2000	2001	2002	2003	2004	2005
1720	Manufacture of made-up textile articles	242.4	247.9	244.5	245.4	294.1	303.2
1750	Manufacture of knitted and crocheted fabrics and articles	29.2	31.2	28.2	32.0	50.3	47.6
1810	Manufacture of wearing apparel	59.1	55.5	55.9	52.3	59.1	80.8
1921	Manufacture of footwear with uppers of leather, other than sports footwear	0.8	0.7	0.7	0.6	0.7	0.7
1922	Manufacture of footwear with uppers of textile materials, other than sports footwear	0.2	0.6	0.1	0.0	0.1	0.0
1925	Manufacture of footwear with outer soles and uppers of rubber, other than waterproof footwear, sports footwear	25.0	29.0	21.4	17.3	18.1	20.0
1929	Manufacture of footwear with outer soles and uppers of plastics, other than waterproof footwear, sports footwear	0.0	0.0	0.0	0.0	0.0	0.0
2020	Manufacture of sports footwear, except skating boots	13.7	15.9	21.0	20.9	28.4	40.4
2030	Manufacture of footwear n.e.c.	3.0	4.6	3.4	4.6	8.8	10.2
2090	Builders' joinery and carpentry	2.7	3.5	3.9	3.8	5.8	6.3
2610	Packing cases, boxes, crates, drums and similar wood packaging	54.0	57.5	63.4	57.2	71.6	96.4
2899	Other wood products; articles of cork plaiting materials and straw	116.5	118.3	111.7	105.1	129.9	163.0
3611	Manufacture of glass and glass products	0.6	0.5	0.7	0.4	0.5	1.7
3612	Manufacture of other fabricated metal products n.e.c.	1.7	1.8	2.2	1.4	0.5	0.8
3619	Manufacture of furniture for households	0.3	0.4	0.3	1.1	6.2	11.7
3691	Manufacture of furniture for offices	3.1	5.0	4.7	5.6	7.0	9.8
3694	Manufacture of furniture for trade and services	42.9	47.6	47.7	42.1	52.3	71.5
7421	Manufacture of other furniture n.e.c.	0.0	0.0	0.0	0.0	0.0	0.0
Total		597.1	621.6	611.4	591.1	733.9	864.5

Source: This study.

Finally, it should be emphasized that the non-dedicated support industries are not involved in importing.

6.7. Trade Balance of the CBI

The net balance of the CBI shows that imports totaled 4,800 million US dollars (CIF), more than double the figures for exports of 2,138 million US dollars (FOB). Whereas the CBI exports contribute 16.7 per cent to the total industrial exports and 10 per cent of the total Colombian exports, imports account for 24 per cent of total industrial imports and 22.6 per cent of total imports.



Table 40. Trade Balance of the CBI

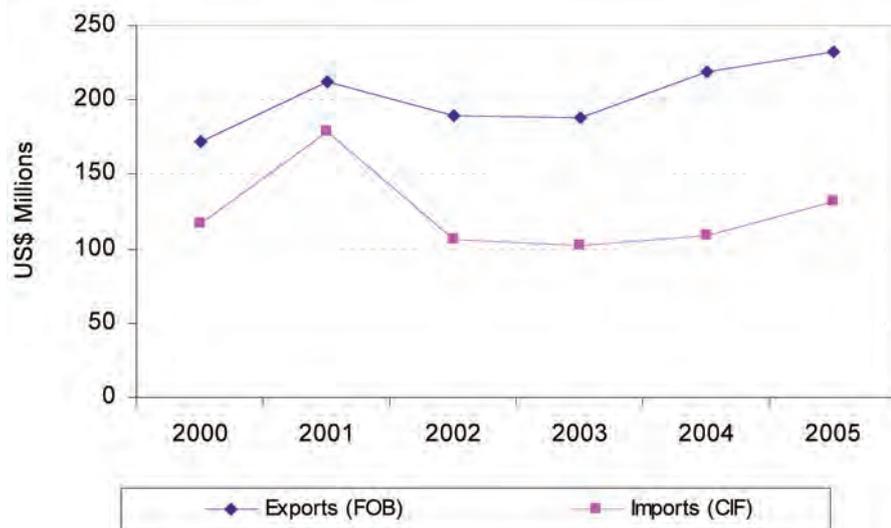
Millions of US dollars

	2000	2001	2002	2003	2004	2005
Core	55.4	33.7	83.0	85.7	109.4	101.5
Interdependent	-1,617.3	-1,679.8	-1,749.2	-2,002.5	-2,249.1	-3,371.2
Partial	306.4	365.4	338.6	442.3	643.5	607.0
Non-Dedicated Support	0.0	0.0	0.0	0.0	0.0	0.0
Total CBI	-1,255.6	-1,280.8	-1,327.6	-1,474.6	-1,496.1	-2,662.6

Source: This study, based on external trade figures from Colombia's National Statistics Department.

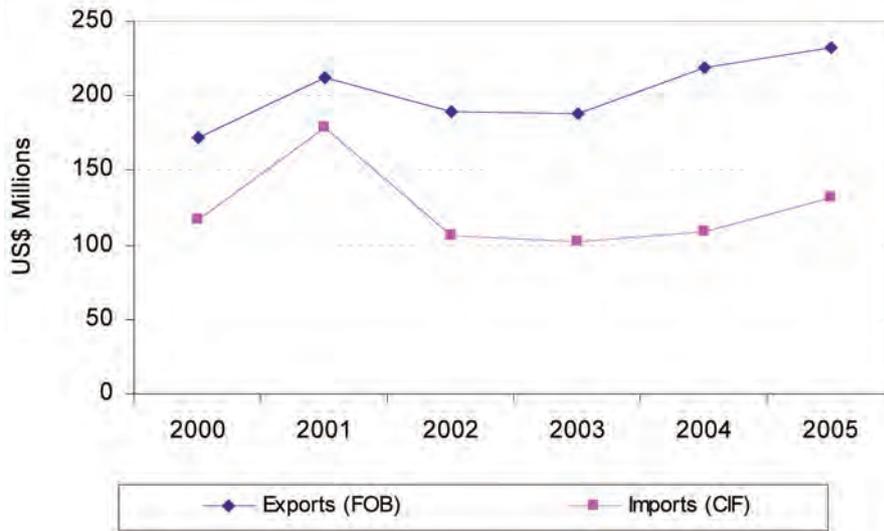
This general analysis indicates that the country is a net importer of the CBI goods and services (Chart 25). However, this trade deficit is greatly influenced by the huge imports of the interdependent industries because, if only the transactions of the core group are considered, the trade balance is positive, i.e. Colombia is a net exporter of CBI goods and services (Chart 26).

Chart 25. Trade Balance of the CBI



Source: This study.

Chart 26. Trade Balance of the Core Industries



Source: This study.

6.8. CBI Service Exports

The following table shows the value of exports and imports of CBI services.

Table 41. Foreign Trade in CBI Services

	2000	2001	2002	2003	2004	2005	2006
CBI Non-Factor Services	-281	-289	-288	-305	-348	-415	-498
i. Exports	252	255	228	252	343	429	586
ii. Imports	533	544	515	556	691	844	1,084
Information technology services	-42	-33	-23	-56	-49	-98	-108
i. Exports	4	8	6	16	17	21	35
ii. Imports	46	40	29	72	66	119	143
Telecommunication services	4	5	3	2	3	5	4
i. Exports	14	14	11	10	14	16	19
ii. Imports	9	9	8	8	11	11	15
Professional and technical services to business	-17	-19	-16	-15	-20	-20	-24
i. Exports	3	3	3	5	7	10	18
ii. Imports	20	21	19	20	28	31	42

	2000	2001	2002	2003	2004	2005	2006
CBI Non-Factor Services	-281	-289	-288	-305	-348	-415	-498
Personal, cultural and recreational services	-3	-2	-1	2	8	-2	-12
i. Exports	23	25	27	31	39	41	46
ii. Imports	27	27	28	29	31	44	58
Audiovisual and related services	-15	-3	-3	-8	-5	-17	-25
i. Exports	12	24	24	20	26	24	28
ii. Imports	26	27	27	29	31	41	53
Other personal, cultural and recreational services	11	1	2	10	12	15	12
i. Exports	12	1	3	11	13	17	18
ii. Imports	1	1	1	1	1	3	5

Source: Based on non-factor services in the balance of payments (BOP), Central Bank figures.

For all services, the values that appear in the BOP are considered, except for telecommunications and professional services. For these items only 7.5 per cent of the declared value has been taken into consideration.

The CBI service exports and imports correspond specifically to the transactions in the non-factor services, which refer to those transactions that are not derived from production factors but from the offer of services resulting from the possession of real goods or financial products.

The balance of services in relation to the CBI is negative: this is derived from the imports of information technology services, which have tripled during the period 2000-2006. On the other hand, audiovisual and related services are Colombia's main service exports in this group with sales more than doubling during this period of analysis. Likewise, the exports of information technology services and professional and technical services to businesses have gained importance due to their recent dynamic performance during the period 2005-2006.

7. Conclusions

The present study has aimed to measure the economic scope, in aggregate terms and at the macro level, of the CBI in Colombia. It has also shown that the function of copyrights and related rights can be examined, like any other rights, in economic terms.

Likewise, this study has emphasized that these industries, within the framework of cultural heritage, constitute a potential source of economic growth and development.

- The CBI make an important economic contribution to the country. In 2005, they contributed 3.3 per cent to GDP; generated 1,031,323 jobs representing 5.8 per cent of total national employment; accounted for exports worth 2,138 million US dollars.
- These industries exhibited more robust growth rates than traditional sectors of the Colombian economy.

The quantitative analysis done in this study shows that these industries: i) mobilize huge resources, generate wealth, employment and foreign exchange; ii) have close economic, industrial, and technological relations with other sectors of the economy; iii) occupy an important place among the best growth performing sectors; iv) present greater economic value compared to many industries engaged in the production of traditional goods and services.

In a globalized world, and with the opportunities offered by the new economy based on the interaction of information and communication technology (ICT), the competitive advantages of the country are not based so much on the abundance of natural resources and the production of non-tradable goods, but on the introduction of components for technological and organizational innovation and strategic information (elements of knowledge).

The CBI include dynamic sectors associated with the ICT which, aside from opening new fields of application for copyright and related rights, will in the immediate future generate new investment, increasing their participation in the economy.

The purpose of quantifying the economic contribution of the CBI to the value added, national employment, and foreign exchange income is to make these industries “visible” to the public and to potential investors and financiers (the public sector, firms and private investors).

From the point of view of public policy, the purpose of this study is to direct specific action which will enable the consolidation and expansion of this sector. This means to encourage implementation of policies which will influence the allocation of resources to generate production capacity at the national or local levels; enhance human resource training through the promotion of professional and technical training; promote the generation of systems of information; diffusion and appropriation of technology.

In Colombia, the CBI are important with their high rate of production and they are characterized for their heterogeneity and different levels of development. They include dynamic sectors associated with the ICT which, aside from opening a range of applications of copyright and related rights, will generate new investments elevating their participation in the economy in the future.

Following global trends in the coming years, the CBI will receive major levels of private investment and will increase their productivity and competitiveness, especially if the right investment climate exists, and this

depends primarily on the effective protection of intellectual property and in particular of copyright and related rights.

Therefore, it is clear that to grant a higher effective protection to these rights provides the conditions necessary to enhance the economic contribution of the activities of creation and innovation in the country. It is, however, evident that the development of some core industries is impeded by piracy.

Against the new demands of the economic environment defined by new technologies in information and communication, value creation and globalization and free trade agreement negotiations, the development of CBI will depend primarily on the capacity of firms to modernize their productive processes, develop synergy and differentiated products, improve market access and create business opportunities.

In this context and considering the rapid development of communication systems, it is fundamental to ensure the strengthening and the modernization of organizations that work collectively to respond to new market conditions and to guarantee in a transparent manner the benefits that should be granted to holders of copyright and related rights.

The results of this study and their supporting methodology are important inputs to strengthen the efforts initiated in the country to set up a satellite account for culture. Likewise, this study lays the foundation for measuring the economic contribution of the CBI to the national economy with a unified methodology and in a sustainable way.

The current satellite account is broad and open, and allows for “the possibility of additional future research to improve the quality of the measurements already taken and to enrich the forms of measurement of some phenomena specific cultural activities.” (DANE, 2000)

One of the major difficulties in ensuring the adequate monitoring of the structure and performance of the CBI is caused by the dispersion and heterogeneity of information in them, especially in those activities that cannot be measured directly with physical products. It is important that organizations mandated to protect copyright and related rights promote the creation of standardized information systems for the continuous monitoring of the CBI among the associations of related activities.

8. Annexes

Annex 1. The CBI in Colombia

Table 42. International Standard Industrial Classification (ISIC) of Copyright-Based Industries (CBI) adapted for Colombia

ISIC	ISIC Copyright-Based Industries
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1. Core Industries

2211	Publishing of books, brochures and other publications
2212	Publishing of newspapers, journals and periodicals
2213	Music publishing
2219	Other publishing
2220	Printing
2231	Art, design and composition
2232	Photo mechanic and related services
2233	Binding of printed sheets
2234	Finishing and laminating
2239	Other publishing-related services n.e.c.
5239	Other retail sales in specialized stores
7210	Consultancy on information systems
7220	Production of information software
7230	Data processing
7430	Advertising
7494	Photographic activities
9112	Activities of professional organizations
9211	Motion picture and video production and distribution
9212	Motion picture projection
9213	Radio and television activities
9214	Dramatic arts, music and other arts activities
9219	Other entertainment activities n.e.c.
9220	News agency activities
9231	Library and archive activities
9249	Other recreational activities

2. Interdependent Industries

- 2101 Manufacture of pulp, paper and paperboard
- 2109 Manufacture of other articles of paper and paperboard
- 2429 Manufacture of other chemical products n.e.c
- 3000 Manufacture of office, accounting and computing machinery
- 3210 Manufacture of capacitors except fixed and variable electronic capacitors
- 3220 Manufacture of television and radio transmitters and apparatus for line telephony and line telegraphy
- 3230 Manufacture of television and radio receivers, sound or video recording or reproducing apparatus and associated goods.
- 3320 Manufacture of optical instruments and photographic equipment
- 3692 Manufacture of musical instruments
- 5237 Wholesale of office, accounting and computing machinery
- 5244 Retail sale of books, newspapers, magazines, office supplies in specialized stores
- 7123 Renting of office machinery and equipment (including computers)
- 7129 Renting of other machinery and equipment n.e.c.

3. Partial Industries

- 1720 Manufacture of made-up textile articles
- 1750 Manufacture of knitted and crocheted fabrics and articles
- 1810 Manufacture of wearing apparel
- 1921 Manufacture of footwear with uppers of leather, other than sports footwear
- 1922 Manufacture of footwear with uppers of textile materials, other than sports footwear
- 1923 Manufacture of footwear with outer soles and uppers of rubber, other than waterproof footwear, sports footwear
- 1924 Manufacture of footwear with outer soles and uppers of plastics, other than waterproof footwear, sports footwear
- 1925 Manufacture of sports footwear, except skating boots
- 1929 Manufacture of footwear n.e.c.
- 2020 Manufacture of other wood products
- 2030 Builders' joinery and carpentry
- 2040 Packing cases, boxes, crates, drums and similar wood packaging
- 2090 Other wood products; articles of cork plaiting materials and straw
- 2610 Manufacture of glass and glass products
- 2899 Manufacture of other fabricated metal products n.e.c.
- 3611 Manufacture of furniture for households
- 3612 Manufacture of furniture for offices
- 3613 Manufacture of furniture for trade and services
- 3619 Manufacture of other furniture n.e.c.
- 3691 Manufacture of jewelry and related articles
- 3694 Manufacture of games and toys
- 7421 Architectural and engineering activities and related technical consultancy
- 7499 Other business activities n.e.c. (translation and interpretation)
- 9199 Activities of other membership organizations n.e.c.
- 9232 Museum activities and preservation of historical sites and buildings

4. Non-Dedicated Support Industries

- 5119 Wholesale on a fee or contract basis of products n.e.c.
- 5131 Wholesale of textiles, clothing and footwear
- 5132 Wholesale of clothing and fur articles
- 5133 Wholesale of footwear
- 5134 Wholesale of electronic and telecommunication parts and equipment
- 5137 Wholesale of paper and paperboard and their products
- 5139 Wholesale of other household goods
- 5151 Wholesale of computers, computer peripheral equipment and software
- 5152 Wholesale of electronic parts and equipment
- 5153 Wholesale trade services of basic industrial chemicals, fertilizers, synthetic resins and plastic materials in primary form
- 5154 Wholesale of textile fibers
- 5159 Wholesale of other intermediate products, waste and scrap
- 5163 Wholesale of office, accounting and computing machinery
- 5190 Other wholesale
- 6041 Local freight transport by road
- 6042 Interurban freight transport by road
- 6043 International freight transport by road
- 6111 International water transport
- 6112 Coastal water transport
- 6120 Inland water transport
- 6212 National freight air transport
- 6214 International freight air transport
- 6220 Non-scheduled air transport
- 6310 Cargo handling
- 6320 Storage and warehousing
- 6390 Activities of other transport agencies
- 6411 National post activities
- 6412 Courier activities other than national post activities
- 6421 Telephone services
- 6422 Network data transmission
- 6423 Radio and television program transmission, on a fee or contract basis
- 6424 Wired telecommunication carriers
- 6425 Other telecommunication services
- 6426 Telecommunication-related services
- 7240 Database activities and on-line distribution of electronic content

Annex 2. Manufacturing Employment in the CBI, 2000-2005

Table 43. Manufacturing Employment in the Core Industries

	2003	2004	2005	2006
Core Industries	270,850	289,573	301,299	321,846
2211 Publishing of books, brochures and other publications	14,376	15,168	17,360	18,774
2212 Publishing of newspapers, journals and periodicals	12,537	15,213	11,203	22,407
2213 Music publishing	825	704	702	710
2219 Other publishing	215	146	221	325
2220 Printing	42,884	47,046	52,487	49,731
2231 Art, design and composition	2,077	2,525	1,713	7,217
2232 Photo mechanic and related services	2,337	2,509	2,342	3,382
2233 Binding of printed sheets	4,604	9,253	10,492	10,327
2234 Finishing and laminating	6,720	6,879	7,051	6,608
2239 Other publishing related services n.e.c.	145	221	264	352
7210 Consultancy on information systems	1,322	1,522	1,530	1,567
7220 Production of information software	19,924	20,764	20,915	21,571
7230 Data processing	22,752	18,895	16,524	17,053
7430 Advertising	28,163	23,450	25,345	26,233
7494 Photographic activities	19,302	20,410	21,421	21,954
9112 Activities of professional organizations	795	665	680	715
9211 Motion picture and video production and distribution	870	2,992	3,010	3,211
9212 Motion picture projection	1,725	2,637	3,343	3,411
9213 Radio and television activities	13,348	11,110	14,453	16,197
9214 Dramatic arts, music and other arts activities	31,183	35,198	36,225	36,377
9219 Other entertainment activities n.e.c.	10,198	10,587	11,122	9,143
9231 Library and archive activities	1,749	3,226	1,101	1,410
9249 Other recreational activities	32,799	38,453	41,795	43,171

Source: This study.

Table 44. Manufacturing Employment in the Interdependent industries

	2003	2004	2005	2006
Interdependent Industries	123,521	128,684	132,471	140,606
2101 Manufacture of pulp, paper and paperboard	7,472	7,708	7,977	8,032
2109 Manufacture of other articles of paper and paperboard	13,675	13,937	15,603	15,931
2429 Manufacture of other chemical products n.e.c	10,866	10,056	9,165	9,921
3210 Manufacture of capacitors except fixed and variable electronic capacitors	2,630	2,694	2,715	3,214
3220 Manufacture of television and radio transmitters and apparatus for line telephony and line telegraphy	4,121	4,501	4,829	5,348
3230 Manufacture of television and radio receivers, sound or video recording or reproducing apparatus and associated goods.	2,309	2,415	2,678	3,354
3320 Manufacture of optical instruments and photographic equipment	1,419	1,954	2,756	3,004
3692 Manufacture of musical instruments	2,425	2,598	2,194	2,622
5237 Wholesale of office, accounting and computing machinery	28,454	32,725	37,124	40,082
5244 Retail sale of books, newspapers, magazines, office supplies in specialized stores	49,155	49,068	46,272	47,297
7123 Renting of office machinery and equipment (including computers)	995	1,028	1,158	1,801

Source: This study.

Table 45. Manufacturing Employment in the Partial Industries

	2003	2004	2005	2006
Partial Industries	306,544	318,997	332,873	352,426
1720 Manufacture of made-up textile articles	19,316	20,867	21,028	22,300
1750 Manufacture of knitted and crocheted fabrics and articles	27,340	24,151	25,103	25,979
1810 Manufacture of wearing apparel	37,767	38,044	35,880	36,433
1921 Manufacture of footwear with uppers of leather, other than sports footwear	6,716	6,196	6,207	6,527
1922 Manufacture of footwear with uppers of textile materials, other than sports footwear	186	146	138	159
1923 Manufacture of footwear with outer soles and uppers of rubber, other than waterproof footwear, sports footwear	24	33	30	31
1924 Manufacture of footwear with outer soles and uppers of plastics, other than waterproof footwear, sports footwear	263	342	462	525
1925 Manufacture of sports footwear, except skating boots	308	383	488	495
1929 Manufacture of footwear n.e.c.	6,508	7,557	7,673	8,008
2020 Manufacture of other wood products	1,100	1,425	1,055	1,461
2030 Builders' joinery and carpentry	6,381	6,635	7,355	8,214
2040 Packing cases, boxes, crates, drums and similar wood packaging	2,820	1,027	1,471	1,587
2090 Other wood products; articles of cork plaiting materials and straw	44,292	49,733	55,145	56,220
2610 Manufacture of glass and glass products	2,699	4,607	4,570	5,670
2899 Manufacture of other fabricated metal products n.e.c.	12,262	13,885	14,012	15,416
3611 Manufacture of furniture for households	7,134	7,616	7,681	7,955
3612 Manufacture of furniture for offices	4,240	5,011	5,583	6,728
3613 Manufacture of furniture for trade and services	1,204	1,091	1,609	3,260
3619 Manufacture of other furniture n.e.c.	114	176	183	211
3691 Manufacture of jewelry and related articles	11,376	12,941	14,458	16,525
3694 Manufacture of games and toys	22,126	8,889	10,799	12,007
7130 Wholesale and retail sale of music and video recordings	21,484	28,315	29,362	32,521
7421 Architectural and engineering activities and related technical consultancy	17,989	20,328	20,211	20,916
7499 Other business activities n.e.c. (translation and interpretation)	49,458	56,079	58,763	59,161
9232 Museum activities and preservation of historical sites and buildings	3,441	3,525	3,611	4,121

Source: This study.

Table 46. Manufacturing Employment in the Non-Dedicated Support Industries

	2003	2004	2005	2006
Non-Dedicated Support Industries	240,839	250,688	264,860	282,552
5119 Wholesale on a fee or contract basis of products n.e.c.	66	71	105	114
5131 Wholesale of textiles, clothing and footwear	1,732	1,734	1,546	1,668
5132 Wholesale of clothing and fur articles	4,733	5,315	5,212	5,218
5133 Wholesale of footwear	774	2,164	1,615	1,673
5134 Wholesale of electronic and telecommunication parts and equipment	1,058	1,145	1,926	2,166
5137 Wholesale of paper and paperboard and their products	3,208	5,556	6,188	5,493
5139 Wholesale of other household goods	5,214	4,562	5,558	5,086
5154 Wholesale of textile fibers	636	824	633	822
5159 Wholesale of other intermediate products, waste and scrap	968	972	1,171	1,154
5163 Wholesale of office, accounting and computing machinery	2,314	2,638	2,693	2,519
5190 Other wholesale	3,962	5,306	3,638	3,826
6041 Local freight transport by road	26,152	24,826	24,793	25,264
6042 Interurban freight transport by road	30,822	38,730	47,132	47,657
6043 International freight transport by road	623	820	799	458
6111 International water transport	346	1,069	151	111
6112 Coastal water transport	1,358	2,464	2,556	2,678
6120 Inland water transport	7,659	1,912	1,500	2,081
6212 National freight air transport	248	244	182	107
6214 International freight air transport	517	478	418	650
6310 Cargo handling	31,300	23,444	23,589	23,660
6320 Storage and warehousing	1,998	2,065	3,080	3,600
6390 Activities of other transport agencies	7,211	9,837	3,180	4,107
6411 National post activities	2,194	1,913	1,873	2,315
6412 Courier activities other than national post activities	28,108	26,263	26,548	27,114
6421 Telephone services	60,152	63,910	72,904	81,651
6422 Network data transmission	1,349	5,038	9,881	11,778
6423 Radio and television program transmission, on a fee or contract basis	1,562	1,753	1,122	1,710
6424 Wired telecommunication carriers	8,061	8,491	8,762	11,451
6425 Other telecommunication services	228	262	156	313
6426 Telecommunication-related services	4,378	4,933	3,842	3,954
7240 Database activities and on-line distribution of electronic content	1,913	1,952	2,111	2,158

Source: This study.

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The Economic Contribution of Copyright-Based Industries of Croatia

Summary

In the last several years, many countries have conducted research for the purpose of creating a clearer determination and a better understanding of the economic activities of the national economy, which are more or less related to copyright and related rights, and with a view to an assessment of their total economic contribution to the economies of these countries.

Such research was conducted in Croatia as a realization of one of the medium-term measures contained in the National Strategy for the Development of the Intellectual Property System. This research was done in cooperation by the State Intellectual Property Office (SIPO) and the Central Bureau of Statistics (CBS), with the technical support of the World Intellectual Property Organization (WIPO). The methodology applied in this research was developed by WIPO and published in the form of a methodological guide.¹ Thus the shortcomings, in the sense of methodological inconsistencies that appear during the implementation of these kinds of studies and that prevent the comparison of their results, were removed. In this Study, the chosen indicators were evaluated for two years, namely 2002 and 2004.

It is important to mention that the methodology set out in the Guide was designed for the assessment of the economic contribution of copyright-based industries, which was measured on the values of the chosen economic indicators. The methodology does not deal with the questions of the assessment of the values of the copyright subjects, nor is it focused on determining the strict economic consequences of the Copyright Law or the share of counterfeited or pirate products on the market.

The research concluded that in Croatia in 2002 the copyright-based industries² generated 15.74 billion kuna of gross output (GO) which constituted 4.8 per cent of the national GO, i.e., 8.02 billion kuna of the gross domestic product (GDP) or 4.4 per cent of the GDP of Croatia, whereas the number of employed reached 54,485 or 4.2 per cent of the total number of employed in Croatia in 2002.

For instance, when comparing the contribution of these industries to GDP (4.42 per cent) with the other sectors, we may observe that it can be compared to education for example (4.52 per cent) or healthcare and social care (5.18 per cent), it is greater than the contribution of other activities such as hotels and restaurants (3.61 per cent) or almost four times greater than the sum of fisheries (0.26 per cent), mining and extraction (0.69 per cent) and household activities (0.31 per cent) in terms of its total contribution to GDP.

The indicators for the year 2004, despite an absolute increase, show a somewhat decreased relative value, with the exception of the number of employed that has increased in terms of its absolute and relative values.

In 2004, the copyright-based industries in Croatia generated 19.18 billion kuna of gross output which is 4.7 per cent of the GO of the national economy, i.e., 9.18 billion kuna of GDP, which in turn constitutes 4.3 per cent of the GDP of the economy of Croatia. The number of employed was 62,936 or 4.65 per cent of the total number of employed in Croatia in 2004.

¹ Guide on Surveying the Economic Contribution of the Copyright-Based Industries, WIPO publication No. 893/E

² For a more detailed definition of the term "copyright-based industries", see chapter IV.

The results of this Study, implemented in Croatia for the first time, are a potentially valuable input for all decision-makers and policy-makers at the macroeconomic level. We find especially valuable the fact that the results obtained can be compared to the results of other national studies based on the same methodological framework (including neighboring countries such as Hungary, and more distant ones such as Singapore), but can also be dynamically compared to future research of the same kind in Croatia. This will enable the economic results of the chosen national policies to be measured and implemented in relation to intellectual property governance.

Table 1. Economic contribution of CBIs in 2002 and 2004

INDUSTRIES	GVP in thousands of kuna	%	GDP in thousands of kuna	%	Number of employed	%
2002						
CORE	10,789,712	3.90	5,686,752	3.138	36,054	2.797
INTERDEPENDENT	3,364,555	1.026	1,579,157	0.871	12,661	0.982
PARTIAL	1,434,747	0.437	658,015	0.363	5,049	0.392
NON-DEDICATED	154,159	0.047	93,748	0.052	721	0.056
TOTAL CBIs	15,743,172	4.800	8,017,672	4.424	54,485	4.227
TOTAL Croatia	327,966,373	100.000	181,230,888	100.000	1,288,902	100.000
2004						
CORE	13,432,681	3.312	6,436,405	2.994	43,641	3.221
INTERDEPENDENT	3,676,824	0.907	1,900,623	0.884	12,710	0.938
PARTIAL	1,802,993	0.445	689,457	0.321	5,546	0.409
NON-DEDICATED	268,757	0.066	156,901	0.073	1,039	0.077
TOTAL CBIs	19,181,254	4.729	9,183,386	4.272	62,936	4.645
TOTAL Croatia	405,576,439	100.000	214,983,101	100.000	1,355,000	100.000

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Abbreviations

CBI	– Copyright-Based Industry
CBS	– Central Bureau of Statistics
CRR	– Copyright and Related Rights
ESA 1995	– European System of Accounts 1995
EU	– European Union
EUROSTAT	– Statistical Office of the European Commission
FISIM	– Financial Intermediation Services Indirectly Measured
GDP	– Gross Domestic Product
GO	– Gross Output (Value of Production)
GRC	– Government of Croatia
GVP	– Gross Value of Production (Output)
GVA	– Gross Value Added
HZZO	– Croatian Institute for Health Insurance
NCA	– National Classification of Activities
NIPS	– National Intellectual Property System
SIPO	– State Intellectual Property Office
SNA 1993	– System of National Accounts 1993
WIPO	– World Intellectual Property Organization

1. Introductory Remarks

1.1. Introduction

Throughout various historical periods and parts of the world, a high correlation between a social attitude towards intellectual property and a level of development or welfare in that society can be identified and confirmed without fail.

The origins of the international intellectual property system date back to the end of the 19th century, a period of industrialization and growth of international trade. Two international treaties of that time, pillars of the world intellectual property system even today, are:

- The Paris Convention for the Protection of Industrial Property of 1883, and
- The Berne Convention for the Protection of Literary and Artistic Works of 1886.

At that time, Croatia's intellectual property system was regulated in accordance with the current highest standards. The common Croatian and Hungarian Parliament passed the first Copyright Act on May 4, 1884. Thus, two years before the Berne Convention, a copyright regime was formally established on Croatian territory. In the field of industrial property, the establishment of a formal system was determined by the decision taken by the same parliament on July 7, 1895 when the Patent Act was passed. Based on this Act, the official gazette 'Povlasti ni viestnik' was regularly published from 1897 in the Croatian language.

From its beginnings and up to the present day, intellectual property protection has been continually present on Croatian territory. Therefore soon after gaining national independence, the Government of Croatia (GRC)³ established its competent national body, today's State Intellectual Property Office (hereinafter referred to as SIPO) and adopted laws and regulations necessary for the provision of continuity of protection of earlier acquired rights in the formal federal State as well as for the acquisition of new intellectual property rights in relation to the legal and economic system of Croatia.

Bearing all this in mind and due to the binding nature of such a past and the realization that modern needs and the predictable future required arrangements for the national intellectual property system (hereinafter referred to as NIPS) based on the principles of excellence, in 2005 the Government of Croatia prepared, as proposed by SIPO, the National Strategy for the Development of the Intellectual Property System of Croatia for the period up to 2010 (hereinafter referred to as National Strategy).

The National Strategy has been prepared on the basis of a fact-finding mission and a professional assessment of the overall national system of acquisition, maintenance and enforcement of intellectual property rights (hereinafter referred to as IPRs) in legislative, institutional and practical implementation terms.

The Strategy is directed towards the improvement of the investment climate and the stimulation of economic, scientific and cultural development by providing a reliable and stimulating system of protection of IPRs through the improvement of the legal, institutional and program framework for the effective protection, maintenance, exercise/enforcement and use/exploitation of intellectual property.

³ Decision of GRC of December 31, 1991, on the establishment of the National Industrial Property Office.

The strategy relates to the following three aspects:

- adaptation of the NIPS,
- implementation of the protection of IPRs and
- improvement of the use of intellectual property as a resource in the economic, scientific, cultural and overall social development of Croatia.

The aim the government wishes to achieve through the implementation of this Strategy is as follows:

- to guarantee (in the short term) the level of protection of IPRs similar to that existing in the European Union (EU), and permanently to maintain and harmonize that level of protection in accordance with all international obligations and agreements concluded by Croatia in this field,
- to ensure (in the medium term) the improvement of the use of intellectual property as a power tool for economic growth and an actuator of scientific, cultural and overall social progress until the average level of such use in the EU is reached or (in the long term) the level of such use in the leading EU countries.

1.2. Study motives

The following measure is also stated as one of the medium-term measures in Chapter VII of the National Strategy under the heading "Improvement of the use/exploitation of intellectual property as a development resource":

"SIPO will initiate, and participate with the Ministry of Economy, Labor and Entrepreneurship (hereinafter referred to as Ministry of Economy) in the preparation of a study on the influence of management and exploitation of copyright and other intellectual property rights on the economy, with the hiring of domestic and foreign experts. The study will show their real effect as reflected through the share of industry based on these rights on the gross national product, the employment rate in those industries, and their share of foreign trade."

Even though the aforementioned measure covers a wider range (intellectual property rights, not just copyright and related rights), the greatest part of this study can be considered to implement said measure. It should be duly noted that this study will not make an estimate of the economic influence of the industries in question, but rather their economic contribution. In fact, the term economic contribution denotes the estimate of the size of the chosen economic indicators generated in relevant industries with respect to the entire national economy, while the term economic influence would denote an assumption of the increase in value of the industries concerned because of copyright, which would be extremely difficult to measure.

The previous measure is closely related to the following one stated in the same Chapter: "SIPO will initiate and, in cooperation with the Central Bureau of Statistics (hereinafter referred to as CBS), develop the content and structure of statistical data on intellectual property, the method of their collection, processing and publication, as the basis for reliable macroeconomic monitoring of and decision making on intellectual property in the Croatian economy."

Given the timeframe specified by the National Strategy, the medium-term measures refer to the period 2006-2007.

The aforementioned measure has, as proposed by SIPO, been planned within the 'Plan of short-term and long-term measures for the prevention of the grey economy' (hereinafter referred to as a Plan) of the Government of Croatia, which was drawn up and whose implementation is coordinated by the Ministry of Economy.

We should emphasize, however, that this kind of research does not provide for the determination of the proportion of counterfeit and pirate products on the national market. Their purpose is to value the 'positive side of the coin' and to provide the bearers of relevant national policies with an insight and a reliable background in order to decide on the allocation of resources for the purposes of creating and preserving values. A different kind of methodology is needed when it comes to valuing the negative effects of the infringement of intellectual property rights. Preparatory work relating to the determination of a coherent and internationally accepted methodology for this kind of research has recently been completed under the auspices of WIPO; therefore it will soon be possible to conduct a study of that sort in Croatia.⁴

The Plan envisages other closely related measures which concern the scope of CBS. For instance, the report on the implementation of the measures from the Plan of May 24, 2005 states that: "The CBS of CROATIA in cooperation with the OECD, Eurostat and the Economic Institute of Zagreb (hereinafter referred to as EIZ), started the Exhaustiveness Project which monitors various oversight mechanisms in the national accounts of Croatia (grey economy)".

Given the timeframe specified by the Strategy, the aforementioned measures also refer to the period 2006-2007. All the common measures of SIPO and CBS arising from the National Strategy, combined with some other measures within the scope of the Ministry of Finance, are directed towards a significant change of background necessary for the functioning of an economy based on knowledge and its application. The implementation of this study (as well as the subsequent iterations anticipated during appropriate periods) forms a part of this strategic intention.

Since this is the first time that this kind of study has been conducted in Croatia and the average level of awareness of intellectual property rights and their role in the national economy has been judged inadequate, an important motive for the implementation of the Study lies in its indirect effect i.e., the contribution to a better understanding of intellectual property by the general public and certain relevant sectors of the public.

For a better understanding of the importance, role and contribution of intellectual property to overall welfare at the national level, it is important to show and explain more clearly certain aspects relevant to its generation, protection, exploitation and reproduction. This is why this Study will include some doctrinal elements that do not directly concern the measurement of the economic contribution of the copyright-based industries in Croatia, but which have rather the aim of indicating to the public the not so widely existing issues of economics and management of intellectual property.

⁴Such a study has already been conducted throughout the world and in Croatia by different stakeholders. The most recent entitled "The Economic Impact of Counterfeiting and Piracy" was conducted by the OECD Directorate for Science, Technology and Industry (the entire document is available on OLIS). The results of the "Global Study on the Rates of Software Piracy", as conducted in Croatia by IDC on behalf of BSA (Business Software Alliance) and published there, have shown a constant decrease in the illicit use of business software in Croatia. This decrease was two per cent in 2006 compared with 2005. Such a trend has been explained by numerous factors, among which the most important are the alignment of the national legislation in the field of copyright, the overall efforts made by the Government to enforce such legislation, permanent education, and raising the level of awareness of the negative effects of piracy.

1.3. Study aims

- To elaborate at an appropriate level certain economic aspects of copyright-based industries, to refer to their market structure, value chain and national copyright regime, and to raise in this way the level of understanding and recognition of intellectual property as the power tool of economic growth.
- To identify, according to the internationally accepted methodology, industries that are based on, or related to, copyright and related rights to a greater or lesser degree in Croatia.
- To quantify the economic contribution of copyright and related rights-based activities to the economy of Croatia, by estimating their contribution to gross domestic product (hereinafter: GDP), and their share of the employment rates and foreign trade.
- To propose a policy, strategy and institutional interventions aimed at fostering the growth and development of copyright and related rights-based activities.

1.4. Implementation of Study

1.4.1. *Organizational aspects*

Within the framework of intensive and comprehensive cooperation with the World Intellectual Property Organization (hereinafter referred to as WIPO), SIPO undertook during 2005 additional collaboration for the implementation of this study in Croatia. After accepting the initiative, in 2006 WIPO secured, under a special cooperation agreement, the right to use this methodology, as well as consultations with foreign delegated experts with experience on the issue and financial support. WIPO will publish this study in English as its own and distribute it to interested users. The deadline for the implementation of the Study is the end of May 2007, which is in accordance with the time period defined earlier for the implementation of the aforementioned measures from the documents of the Government of Croatia. The expert team includes specialists in complementary fields, especially in intellectual property law and economics, as well as statistics.

The authors of the Study are:

Željko Topic, SIPO
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The delegated foreign consultants appointed by WIPO in accordance with SIPO are Krisztina Penyigey (economist) and Péter Munkácsi (lawyer), both members of the Hungarian Patent and Trademark Office and authors of a similar study prepared in Hungary in 2005.

1.4.2. *Methodological aspects*

During the last decade, a lot of countries⁵ have made the effort to undertake research with a view to estimating the economic contribution of copyright-based industries. Due to the complexity of the research subject, a number of influential factors which are different in various countries and the majority of which are subject to intensive and rapid changes, as well as a range of methodological inequalities during the implementation of these kinds of studies, it was very difficult to compare their results.

⁵These are firstly the United States of America, followed by the Netherlands, Sweden, Germany, Finland, the United Kingdom, Australia, Japan and the countries of MERCOSUR (Argentina, Brazil, Paraguay, Uruguay and Chile), Singapore, Hungary, etc.

For the same reasons, even though many correct solutions have been applied, they do not form a coherent methodological and analytical tool as the basis for the implementation of further studies. In order to eliminate the abovementioned shortcomings, WIPO has developed a methodology and published a methodological guide for the implementation of this kind of studies.

What new value did the WIPO guide bring to this kind of research?⁶

1. Clarifying the basic concepts of copyright and their connection to the related economic activities, as well as outlining the scope of copyright-based industries. In this way, the basic prerequisite for the interpretation of relevant economic indicators in the right context was provided;
2. 'Defining copyright-based industries. These definitions link the subject of copyright protection with the process of creation, production, distribution and consumption of copyright goods and services';
3. Establishing a relationship between copyright-based activities and statistical reporting;
4. The guide offers a set of research methods, mainly for the calculation of GDP;
5. The guide recommends a consistent design for the launch of the study.

We should emphasize that the methodology defined in the Guide was designed for an estimate of the economic contribution of copyright-based industries via selected economic indicators, and in that sense this has clearly set boundaries i.e., the extent of the results of research done on this methodological example. The most important limitations we should mention are:

1. The methodology does not deal with the questions of valuation of copyright;
2. It is not focused on determining the strict economic impact of copyright law;
3. It does not provide for determining the level of pirated goods on the market.

In order to ensure the quality, reliability and comparability of results (with other countries but also with one's own in time dynamics), it is necessary to follow this unique and internationally accepted methodological framework.

1.4.3. Structure of the Study

The Study is structured as follows:

1. The first part contains introductory remarks;
2. The second part includes an overview of the copyright legal system in Croatia;
3. The third part consists of the identification of copyright industries and a presentation of the applied methodology and special indicators that were used;
4. The fourth part analyzes the economic contribution of copyright-based industries in Croatia as well as an international comparison with the results of other national studies;
5. The fifth part contains the conclusions and suggestions of possible policies;
6. The sixth part consists of annexes.

1.4.4. Implementation steps

The study was planned and implemented in four steps. Several essential activities as well as the expected results were determined for each step. A presentation of the plan is given in the following table.⁷

⁶Dimitar Gantchev, 'The WIPO Guide on Surveying the Economic Contribution of the Copyright Industries' - Review of Economic Research on Copyright Issues, 2004, vol. 1 (1), pp. 5-16.

⁷Plan presented rigidly follows the original from the WIPO Guide, p.62.

Steps	Step 1 Identification and classification of industries	Step 2 Collection of data	Step 3 Measurement of the contribution of specific industries	Step 4 Analysis and presentation of the results
Main elements	<p>Set up the research team</p> <p>Check copyright laws and regulations</p> <p>Analyze copyright chain</p> <p>Verify ISIC codes correspondence</p>	<p>Identify relevant official statistics by industry groups</p> <p>Identify blank areas</p> <p>Collect additional specific statistics</p> <p>Complete data</p>	<p>Decide on the method for each industry/indicator</p> <p>Establish outputs by industry</p> <p>Adjustment of data</p> <p>Weighting</p> <p>Establish value added, share of employment and foreign trade</p>	<p>Analyze main trends and tendencies</p> <p>Prepare comparisons</p> <p>Finalize spreadsheets, presentation tables and diagrams</p>
Deliverables	<p>Table of the industries to be studied</p> <p>Reference industry codes established</p>	<p>Reliable disaggregated data compiled</p>	<p>Contribution to value added, employment and foreign trade established</p>	<p>Study of the contribution of CBIs to the national economy of Croatia</p>

2. The Copyright and Related Rights Legislative Scheme

2.1. Legal sources of copyright in Croatia

Since October 30, 2003 the field of copyright and related rights in Croatia has been regulated by the Copyright and Related Rights Act, OG 167/03. The constitutional basis for passing this Act is to be found in the provision of Article 68/4 of the Constitution of the Republic of Croatia whereby "the protection of moral and economic rights deriving from scientific, cultural, artistic, intellectual and other creative activities" is guaranteed.

Pursuant to the Croatian Constitution and in accordance with the provisions of the Universal Declaration of Human Rights⁸ and the International Covenant on Economic, Social and Cultural Rights,⁹ copyright belongs to the category of basic liberties and human rights of every man and citizen.

Croatia is a signatory to all the essential international treaties, conventions and agreements which regulate the field of copyright and related rights,¹⁰ and the Copyright and Related Rights Act has been harmonized with all EC directives concerning the copyright and related rights enacted prior to its entry into force.¹¹ With regard to harmonization with Directive 2004/48/EC of the European Parliament and the Council on Enforcement of IPRs,¹² the National Strategy envisages that this task will be completed by the end of 2007. Nonetheless, even in the absence of formal harmonization with this Directive, the Copyright and Related Rights Act, and other acts which are relevant to the enforcement of IPRs in Croatia,¹³ already provide for the measures, proceedings and remedies that guarantee efficient enforcement of intellectual property rights in civil¹⁴ and administrative proceedings, as well as in criminal and misdemeanor proceedings.

⁸ Article 27/2 of the Universal Declaration of Human Rights of 1948 provides: "Everyone has the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author".

⁹ Article 15/1/c of the International Covenant on Economic, Social and Cultural Rights of 1966 provides: "The States Parties to the present Covenant recognize the right of everyone: ... (c) To benefit from the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author".

¹⁰ These are: the Berne Convention for the Protection of Literary and Artistic Works (OG IT 12/93, 3/99 and 11/99); Universal Copyright Convention as revised at Paris on July 24, 1971 (OG IT 12/93 and 3/99); Convention Establishing the World Intellectual Property Organization (OG IT 12/93 and 3/99); the Rome Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations (OG IT 12/93 and 3/99); Brussels Convention Relating to the Distribution of Programme-Carrying Signals Transmitted by Satellite (OG IT 4/94); Convention for the Protection of Producers of Phonograms Against Unauthorized Duplication of Their Phonograms (OG IT 12/99); World Trade Organization Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement); World Intellectual Property Organization Copyright Treaty (OG IT 6/00); World Intellectual Property Organization Performances and Phonograms Treaty (OG IT 6/00). The latter two instruments are jointly referred to as the WIPO Internet Treaties.

¹¹ These are the following directives: Council Directive 91/250/EEC of May 14, 1991 on the Legal Protection of Computer Programs - Official Journal L 122, 17/05/1991; Council Directive 92/100/EEC of November 19, 1992 on Rental Right and Lending Right and on Certain Rights Related to Copyright in the Field of Intellectual Property - Official Journal L 346, 27/11/1992; Council Directive 93/83/EEC of September 27, 1993 on the Coordination of Certain Rules Concerning Copyright and Rights Related to Copyright Applicable to Satellite Broadcasting and Cable Retransmission - Official Journal L 248, 06/10/1993; Council Directive 93/98/EEC of October 29, 1993 Harmonizing the Term of Protection of Copyright and Certain Related Rights - Official Journal L 290, 24/11/1993; Directive 96/9/EC of the European Parliament and of the Council of March 11, 1996 on the Legal Protection of Databases - Official Journal L 077, 27/03/1996; 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 - Official Journal L 167, 22/06/2001; 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 - Official Journal L 272, 13/10/2001.

¹² Directive 2004/48/EC of the European Parliament and of the Council of April 29, 2004 on the Enforcement of Intellectual Property Rights - Official Journal L 195, 02/06/2004.

¹³ In view of the provisions of the Enforcement Directive, the following are relevant to copyright and related rights: the Civil Proceedings Act (NN 53/91, 91/92, 58/93, 112/99, 88/01 and 117/03), the Execution Act (OG 57/96, 29/99, 42/00, 173/03, 194/03, 151/04 and 88/05) and the Obligations Act (OG35/05).

¹⁴ The Croatian legal system contains provisions which regulate the issue of the presumption of copyright, measures for protecting evidence in civil proceedings, the right of information, preliminary and precautionary measures, corrective measures, court orders and alternative measures, damages and publication of judicial decisions.

On the basis of the above, it can be concluded that the legislation of Croatia is integrated into the international system for protection of copyright and related rights, and that it is ready for integration into the European system, given that Croatia is a candidate country awaiting membership of the EU.¹⁵

2.2. Development of the copyright and related rights system

It would not be correct to assume that merely through the entry into force of the Copyright and Related Rights Act in 2003 did Croatia become part of the international copyright and related rights system. This Act merely represents a stage in the evolution of the copyright system in Croatia, which in fact has a long tradition. The first Act on copyright dates back to 1884. Ever since, the private law orientations of the copyright system and its regulatory scheme, resembling that of the civil law systems of continental Europe, have been adhered to on Croatian territory, irrespective of the State of which Croatia was a part at any given moment. Thus, the 1978 Copyright Act of the former Yugoslavia, amended and supplemented on several occasions, and transposed into the legislation of Croatia along with the subsequent amendments and additions,¹⁶ was also in force until 2003 when the present Copyright and Related Rights Act was enacted. Not only in terms of legislation, but also in practice, copyright and related rights have been efficiently protected and enforced to an extent which, according to its private law characteristics, reached far beyond the general context of the then existing economic and social organization. Especially encouraging was the position of authors in the then tax system. Individual copyright contracts have been entered into through intermediaries, the State agencies, while small and mechanical rights have been managed by the collective societies.¹⁷

From 1990 onwards the copyright and related rights system experienced rapid progress. Though important in terms of individual protection and the enforcement of rights, progress is far more significant when it comes to collective management of copyright and related rights. The increasing growth and development of the system for collective management of copyright and related rights can be attributed, inter alia, to the modernization and computerization of the collective rights management societies. To a great extent it is due also to the relatively efficient enforcement of intellectual property rights in civil, criminal, misdemeanor and administrative proceedings. Hence the content of the provisions incorporated in the 2003 Copyright and Related Rights Act, especially in the part concerning the enforcement of rights in civil proceedings, has largely been influenced by the case law developed in the period since 1997.

2.3. The author and his/her work

In Croatian law, an author is a natural person who created a work. The work of an author belongs to the author due to its own nature and from the time of its creation. The work of an author is an individual, original intellectual creation in the field of literature, science and art regardless of the manner and form of expression, type, value or purpose. Copyright protects expressions and not ideas.

¹⁵ Within the negotiations on accession of Croatia to the European Union, the issues related to intellectual property have been dealt with under the separate negotiation chapter (Chapter VII). Thus far the course of the negotiations has covered explanatory screening, bilateral screening and negotiation positions of both parties. The stages mentioned showed the high level of harmonization of the Croatian intellectual property system with the relevant EU system. On this basis the negotiations on Chapter VII were opened on March 29, 2007.

¹⁶ Through the transposition of the Federal Acts in the Field of Education and Culture which Apply in Croatia as the Republic Acts (OG 53/91), the 1978 Copyright Act (OG 9/78, 24/86 and 21/90) has been incorporated in the legislation of Croatia. This Act contained the provisions concerning copyright and performers' rights. The latter right was introduced into the Act as a result of the 1990 amendments and additions. Subsequent to its transposition, the Copyright Act was amended and supplemented on several occasions: the Amendments and Additions to the Copyright Act OG 58/93, the Amendments and Additions to the Copyright Act OG 76/99, Corrigendum to the Amendments and Additions to the Copyright Act OG 127/99 and Amendments and Additions to the Copyright Act OG 67/01. The most important amendments date from 1999 when the following related rights were introduced: the right of phonogram producers and the right of broadcasting organizations.

¹⁷ At that time those were the right of public performance and the right of mechanical reproduction.

The works protected by copyright are mentioned, by way of example, in the Copyright and Related Rights Act as follows:

- linguistic works (written and spoken works as well as computer programs);
- musical compositions with or without words;
- dramatic and dramatico-musical works;
- choreographic and pantomime works;
- works of visual art;
- works of architecture;
- works of applied art and industrial design;
- photographic works;
- audiovisual works;
- cartographic works;
- displays of a scientific or technical nature such as illustrations, plans, sketches, tables, etc.

2.4. Copyright

2.4.1. *The principle of private law inherent in copyright*

The principle of private law underpins the 2003 Copyright and Related Rights Act.

Copyright is envisaged as the highest authority of private law which an author may have in relation to his/her work. This is a single right which consists of three components: one that protects the author's personal and physiological connections to his/her work (the moral rights of an author), the second that protects the author's economic interests in his/her work (the economic rights of an author), and the third which protects other interests of an author in his/her work (other rights of an author).

As a single right, copyright is as a whole inalienable and inseparable and may not be subject to the levy of execution. Copyright as a whole is not transferable, save by means of succession. However, the author is free to dispose of the economic component of his/her right.

2.4.2. *Economic rights of an author*

The legislative definition of the economic rights of an author is essentially comparable to the definition of the right of ownership in the Ownership and Other Rights In Rem Act¹⁸ and vests in the author the strongest legal power. The author has an exclusive right to do whatever he/she wishes with his/her work and to exclude from that any other person. The economic rights of an author are unlimited content, and individual property interests that are specifically defined in the provisions of Articles 18-31 of the Copyright and Related Rights Act are merely the emanations of the unrestricted economic rights of an author. Article 18 points out four basic forms of use of a work: the reproduction right (copying), the distribution right (offering for sale or other), the right of communication to the public and the right of adaptation.

2.4.2.1 *The reproduction right*

The reproduction right is regulated in a way that is appropriate to the so-called analog and to the so-called digital environment, following the model of the WIPO Internet Treaties and the Directive on Copyright and Related Rights in the Information Society. This right gives its holder the exclusive right to make the work in one or more copies, in its entirety or in part, directly or indirectly, temporarily or permanently, by any means and in any form. It also covers the concept of fixing by which fixation of a work on a tangible or other suitable medium is understood.

¹⁸Ownership and Other Rights In Rem Act OG 91/96, 68/98, 137/99, 22/00, 73/00 and 114/01.

2.4.2.2 The distribution right

The distribution right is defined as the exclusive right to put on the market the original or the copies of the work of an author by offering it for sale or offering it in another way to the public for the same purpose. It comprises also the right of rental, which means making available for use, for a limited period of time and for direct or indirect economic or commercial advantage. The distribution right thus includes any transfer of ownership over the tangible copy of the copyrighted work, with or without remuneration, but also other ways of placing on the market the work which is fixed on a tangible medium, although they do not entail the transfer of ownership over the copy in question.

2.4.2.3 The right to communicate a work to the public

The right to communicate a work to the public is defined as an exclusive right of unlimited content. Any form of communication to the public qualifies as the exclusive right of an author. Article 21 of the Copyright and Related Rights Act contains an exemplary list of rights belonging to the category of communication of the work to the public: the right of public performance, the right of first public presentation of dramatic works, the right of public broadcasting, the right of public communication of a fixed work, the right of public presentation, the right of broadcasting and re-broadcasting, the right of public communication of a broadcast and the right to make it available to the public.

The latter represents an author's exclusive right to communicate the work to the public by wire or wireless means, including making available to the public their works in such a way that members of the public may access them from a place and at a time individually chosen by them. This definition has been adjusted for the use of the copyrighted works in a digital environment, in accordance with the rules contained in the WIPO Internet Treaties and the Directive on Copyright and Related Rights in the Information Society.

2.4.2.4 The right of adaptation

The right of adaptation is an exclusive right of translation, adjustment, musical cover or any other alteration of the work. The use of the right of adaptation in Croatia has so far not been of much significance in practice; nor has it been a source of great income.

Derived copyright holders, mostly the publishers of musical works, particularly those who advocate in interest of foreign authors, have recently raised the issue of exercise of the adaptation right as an exclusive economic right of an author.

2.4.3. The moral rights of an author

The moral rights of an author are: the right of first disclosure, the right of recognition of authorship, the right to the integrity of a work and to the honor or reputation of the author, and right of revocation. Their importance does not lie in their economic significance; hence they fall outside the scope of this Study. On the other hand, the moral rights of an author considerably limit his/her possibility to transfer copyright as a single, whole right. Owing precisely to the personal component of copyright, it is inalienable as a whole; it cannot be transferred in its entirety. Pursuant to the Copyright and Related Rights Act, copyright cannot be transferred inter vivos to another person, so that the author no longer has it. The transfer of copyright as a single right is permitted only in the course of succession.

2.4.4. Other rights of an author

Owing to their nature, other rights of an author can be categorized neither as the exclusive economic rights of an author nor as the moral rights of an author. They have some economic characteristics and/or some personal characteristics, but also some other features. Owing to their diverse nature they cannot be classified in any of the aforementioned categories. These rights are: the right to remuneration, the resale right and other additional rights. Some of these rights have significant income potential.

2.4.4.1 The right to remuneration for reproduction of a work for private or other personal use

When the work of an author, in accordance with the limitations of the exclusive economic right of reproduction, may be reproduced even in the absence of the author's consent for private or other personal use, the author has the right to appropriate remuneration. This right may be managed only collectively. The debtors are the producers or importers of the blank audio and video media as well as the producers or importers of the devices for audio and visual recording. In addition, the authors have the right to appropriate remuneration from the natural or legal person that offers photocopying services that must be paid for.

2.4.4.2 Right to remuneration for public lending

The author has the right to equitable remuneration if the original or the copies of his/her work, in respect of which further distribution is permitted, are lent through public libraries. This right may only be managed collectively, but in practice it is still not exercised.

2.4.4.3 Resale right

The author has the right to an equitable share of the sales price realized in each subsequent sale of the original of his/her visual work following the first sale of the work. Amounts belonging to the author pursuant to the Copyright and Related Rights Act correspond to those proposed in the Directive on the Resale Right. This right is not exercised in practice.

2.4.4.4 Right of access to a work and the right to prevent public presentation of a work

The right to access a work and the right to prevent its public presentation are not economic in nature and hence are not examined in this study.

2.5. Related rights

The rights related to copyright, according to the Copyright and Related Rights Act, are: the right of performing artists in relation to their recorded and non-recorded performances, the right of phonogram producers in relation to their phonograms, the right of videogram producers in relation to their videograms, the right of broadcasting organizations in relation to their broadcasts, the right of publishers in relation to their publications, and the right of database producers in relation to their databases. The provisions of the Copyright and Related Rights Act, containing the definitions of the individual rights of an author as well as the other provisions regulating copyright, apply *mutatis mutandis* to related rights. Among the related rights only the right of performing artists has both an economic and personal component, whereas all other related rights have only the economic component which may be freely transferable. The contents of related rights are limited; the holders of the rights cannot do just anything they wish with the subjects of related rights. They possess only those exclusive economic rights and the rights of remuneration which are expressly granted in the Copyright and Related Rights Act.

2.6. Disposal of copyright and related rights

As previously pointed out, copyright is not transferable *inter vivos*. However, in practice this does not cause any difficulties with the commercialization of copyright. This right may be subject to the interests of a person other than the author, such as the right of use which can be established either as an exclusive or non-exclusive right. When the right of use is established as an exclusive right the holder of this right may exclude anyone else, including the author himself/herself, from the use of the work within the limits that have been defined in the contract on transfer of the right. If the right of use is established as a non-exclusive right, more than one person at the same time uses the copyright and does not prevent other

persons from doing the same. The right of use is transferred from the author to another person by means of a contract. Copyright may be transferred by entrusting its management to another person, which is the case when a collective society manages the right in the collective system. In contrast to copyright, related rights are freely transferable.

2.7. Substantive limitations on copyright and related rights

The Copyright and Related Rights Act prescribes a number of limitations on copyright and related rights. A list of the substantive limitations contains many such limitations provided for in the Directive on Copyright in the Information Society.

2.8. Exercising copyright

According to the Copyright and Related Rights Act, copyright and related rights can be exercised individually and collectively. Individual management relates to individual use of works and is controlled by means of a contract. Individual management is carried out by the right holder himself/herself or through an agent. Article 156 contains a list of the rights which may be managed in the collective system by the collective societies which act in their own name and on behalf of the authors they represent. Some of the rights may not be exercised other than through the collective societies.

The right holder always has the right to remuneration for the use of his/her work or the subject of the related right. In case of individual management of this right, the amount of remuneration is defined in the contract. Likewise, in case of collective management of rights remuneration is primarily defined in the contract; however, in the absence of a contract the relevant remuneration is defined by the collective society itself. The precise procedure for defining the tariff is prescribed by the Copyright and Related Rights Act, and it involves the users' representatives on the one hand, and the collective society on the other. If negotiations yield no agreement, the parties are obliged to request the opinion of the Council of Experts.

The Council of Experts is the body appointed by the Government of Croatia, and has a President and four other members selected from among the experts in the field of copyright and related rights. Given that the Copyright and Related Rights Act is based on the principle of private law, the opinion of the Council of Experts is not binding on the parties, but serves merely as guidance.

Collective management of copyright and related rights is regulated in greater detail by the provisions contained in Title IV of the Copyright and Related Rights Act as well as those contained in the Regulation on the Professional Criteria and Procedures for Granting Authorizations for Performing Collective Management of Rights and on Remuneration for Work Done by the Council of Experts, OG 72/04.¹⁹ Copyright and related rights may be collectively managed exclusively by the societies of rights holders which received authorization from the State Intellectual Property Office²⁰ to carry out these activities and which function on a non-profit basis. The Act stipulates that only one society representing a specific category of right holders may receive approval. Where there are two or more requesting such approval, the one with the largest membership on the basis of powers of attorney, along with the appropriate number of contracts on mutual representation concluded with foreign societies, will be granted authorization.

¹⁹In addition to these instruments, also in force are the Regulations on the Amount of Remuneration for Work Done by the Council of Experts, OG 24/06.

²⁰In accordance with Art. 169 of the Copyright and Related Rights Act, the State Intellectual Property Office carries out inspections of the work done by the collective societies managing copyright and related rights.

The society manages the rights in its own name and on behalf of rights holders, performing in particular the following tasks: granting permission for use of copyrighted works or subjects protected by related rights when such permission is necessary pursuant to the Copyright and Related Rights Act, collecting royalties for use, distributing collected royalties between rights holders, controlling the use of copyrighted works and subjects protected by related rights, and initiating and conducting enforcement proceedings in case of infringement. Distribution of collected royalties is performed in accordance with the data on the use of copyrighted works and subjects of related rights, and with the rules on distribution of compensation collected, adopted by the competent body pursuant to the society's statutes.

Collective management of copyright in Croatia has existed for 60 years, and currently there are five collective societies managing copyright and related rights in Croatia.²¹

2.9. Protection of copyright and related rights in case of infringement

The legal system of Croatia provides various remedies for the purpose of protecting copyright and related rights from infringement. Protection may be claimed within civil, criminal, including misdemeanors, and administrative proceedings. The initiative for the institution of proceedings and for the imposition of remedies lies, in principle, with the holders of copyright and related rights. However, the most serious infringements sanctioned as criminal offenses are prosecuted ex officio. Within the system of protection of copyright and related rights an active role, either as a result of an ex officio action or at the request of the party, is also given to the customs authorities and State inspectorate, in particular in cases of pirate and counterfeit goods.

²¹ The Croatian Composer's Society – Collecting Society (HDS ZAMP) manages, in the collective system, copyright in public performances of musical works and mechanical reproductions, as well as the right to remuneration for private copying; the Croatian Performer's Rights Collecting Society (HUZIP) manages the rights in public performances for performing artists as well as the so-called right to remuneration for private copying; the Society for Protection, Collection and Distribution of Phonogram Rights (ZAPRAF) manages, on behalf of phonogram producers, the right to remuneration for public performance and private copying; the Croatian Film Directors Guild (DHFR) manages, on behalf of the holder of the rights in audiovisual works, the right of cable retransmission and the right to remuneration for private copying; the Society ZANA manages the right to remuneration for private copying on behalf of publishers.

3. Identification of Copyright-based Industries and Applied Methodology

3.1. Terminology

The definition of terminology relating to the most important concepts used is of the utmost importance for a clearer understanding of the research results of studies and other similar documents, where the research subject consists of layers and has a number of different subjects and phenomena, interconnected and interdependent to a greater or lesser extent in such a way that some of these categories have different content and scope in different parts of the world as well as different meanings in various languages.

The classification and determination of copyright-based industries (economic activities) in the Croatian economy has been performed according to the aforementioned WIPO guide which distinguishes between four large groups or categories. These are the following:

1. Core Copyright Industries;
2. Interdependent Copyright Industries;
3. Partial Copyright Industries;
4. Non-dedicated Support Industries.

The English term "*industries*" designates different categories which the Croatian language interprets as industry, but other economic activities as well. Therefore the terms 'copyright-based industries' and 'copyright-based activities' used in this Study must be understood as synonyms.

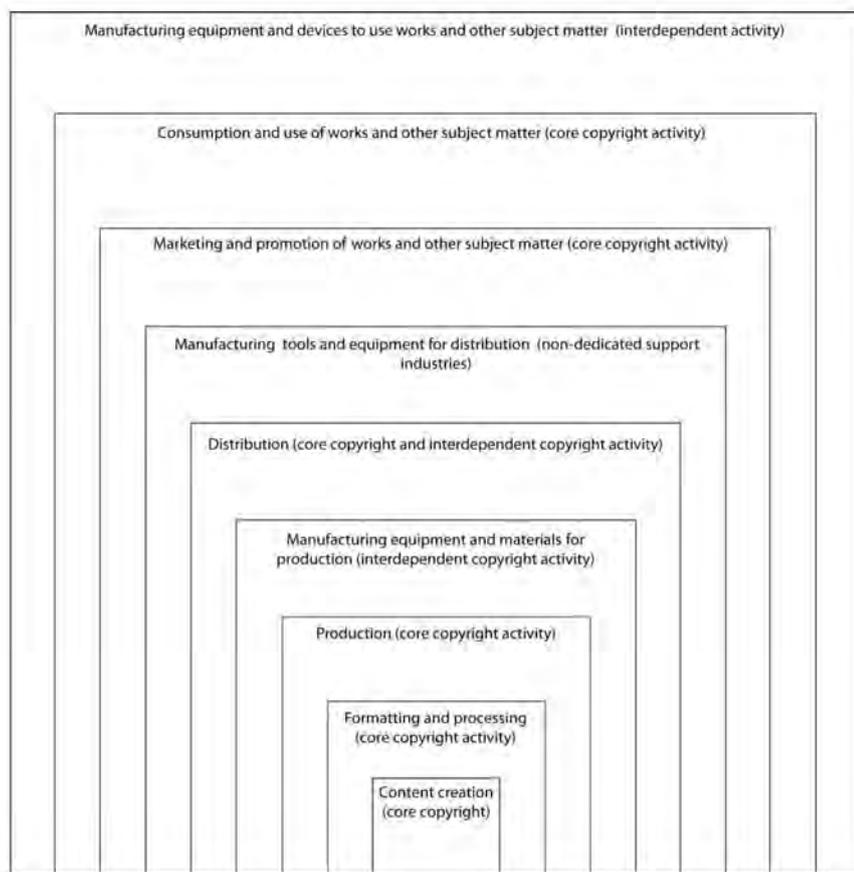
It is obvious from the aforementioned distinction of industries that the strength of their link to copyright differs. When using the term *copyright-based industries or activities*, not only the first but all four categories mentioned above are implied, regardless of the strength of their link to copyright. Besides, for semantic and stylistic reasons, for these groups of economic activities this Study uses terms such as CRR industries or CRR activities, where the abbreviation CRR represents copyright and related rights, and the whole expression becomes a Croatian version of the English term *Copyright-Based Industries*.

The previous chapter explained in detail copyright and related rights in the legislative system of Croatia. For practical reasons, this Study will continue to use the phrase copyright, which should be understood as comprising related rights as well.

3.2. General description of the market structure and the value chain of copyright-based industries (CBIs)

Even though they are very different in the sense that the market structure and value chain of particular copyright-based activities differ from the same categories of other activities, it is still possible to determine a general common framework and show the radial influence of the basic creative core directly based on copyright on the national economy. The diagrammatic representation of this general framework is given in the following picture.²²

Picture 1. Diagram of a general framework of the market structure of CRR

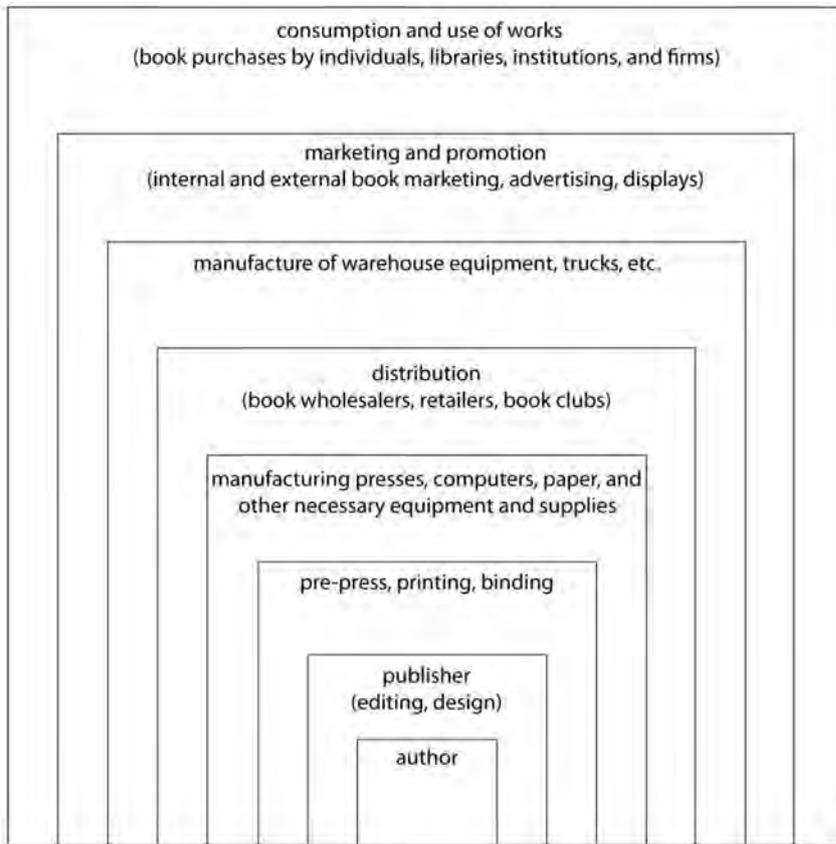


A diagrammatic view of the specific operation of the mechanism described above is presented in the following picture, using the example of literary works and the market structure, i.e., the value chain for a copyright-protected literary work.²³

²² Source: "The Contribution of Copyright and Related Rights to the European Economy", Final Report, October 2003, p.18.

²³ Source: "The Contribution of Copyright and Related Rights to the European Economy", Final Report, October 2003. p.19.

Picture 2. Diagram of the market structure of literary works



3.3. Categorization of CBIs

3.3.1. Core copyright industries

“The core copyright industries are industries that are wholly engaged in creation, production, and manufacturing, performance, broadcast, communication and exhibition, or distribution and sales of works and other protected subject matter.”²⁴

The following industries fall into this category:

- press and literature;
- music, theatrical productions and operas;
- motion pictures and video;
- radio and television;
- photography;
- software and databases;
- visual and graphic arts;
- advertising services;
- collective management associations.

²⁴WIPO guide, p. 29.

3.3.2. Interdependent copyright industries

“Interdependent copyright industries are industries that are engaged in 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.”²⁵

This category includes examples of:

- television sets, radios, CD and DVD players, electronic games equipment and similar equipment;
- computers and equipment;
- musical instruments;
- photographic and film-making equipment;
- photocopiers;
- blank recording media;
- paper.

3.3.3. Partial copyright industries

“The partial copyright industries are industries in which a portion of the activities is related to works and other protected subject matter and may involve creation, production and manufacturing, performance, broadcast, communication and exhibition or distribution and sales.”²⁶

The following industries belong to this category:

- apparel, textiles and footwear;
- jewelry and coins;
- other crafts;
- furniture;
- household goods, china and glass;
- wall coverings and carpets;
- toys and games;
- architecture, engineering, surveying;
- interior design;
- museums.

3.3.4. Non-dedicated support industries

“The non-dedicated support industries 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.”²⁷

The following industries come under this category:

- general wholesale and retail sale;
- transportation;
- telephony, telecommunications and the Internet.

²⁵ WIPO guide, p. 33.

²⁶ WIPO guide, p. 33.

²⁷ WIPO guide, p. 33.

3.4. Identification and classification of CBIs in Croatia

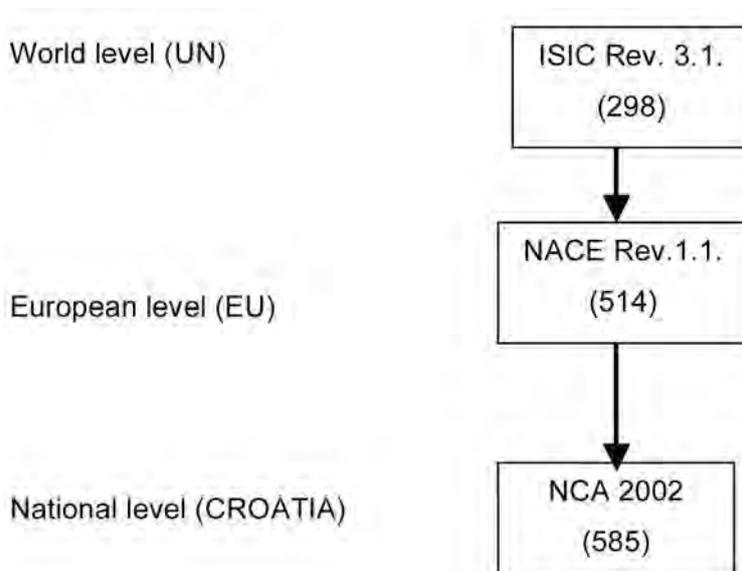
One of the basic requirements of all statistical procedures in the world is the existence of a recognizable framework in which different kinds of statistical data collected can be placed in order for them to be analyzed and represented in a meaningful way. The development of classification systems that ensures a common language for the collection and representation of statistical data tries to satisfy this requirement. Therefore, the purpose of the classification systems lies in their unambiguous description of social, economic or natural phenomena.

Bearing this in mind, the first and foremost step in the process of determining the economic contribution of copyright-based industries to the national economy is to identify and classify those activities. These industries represent the clusters of activities that in a certain way are related to copyright. These activities concern the production, distribution and final use (exploitation) of intellectual works protected by copyright and related rights.

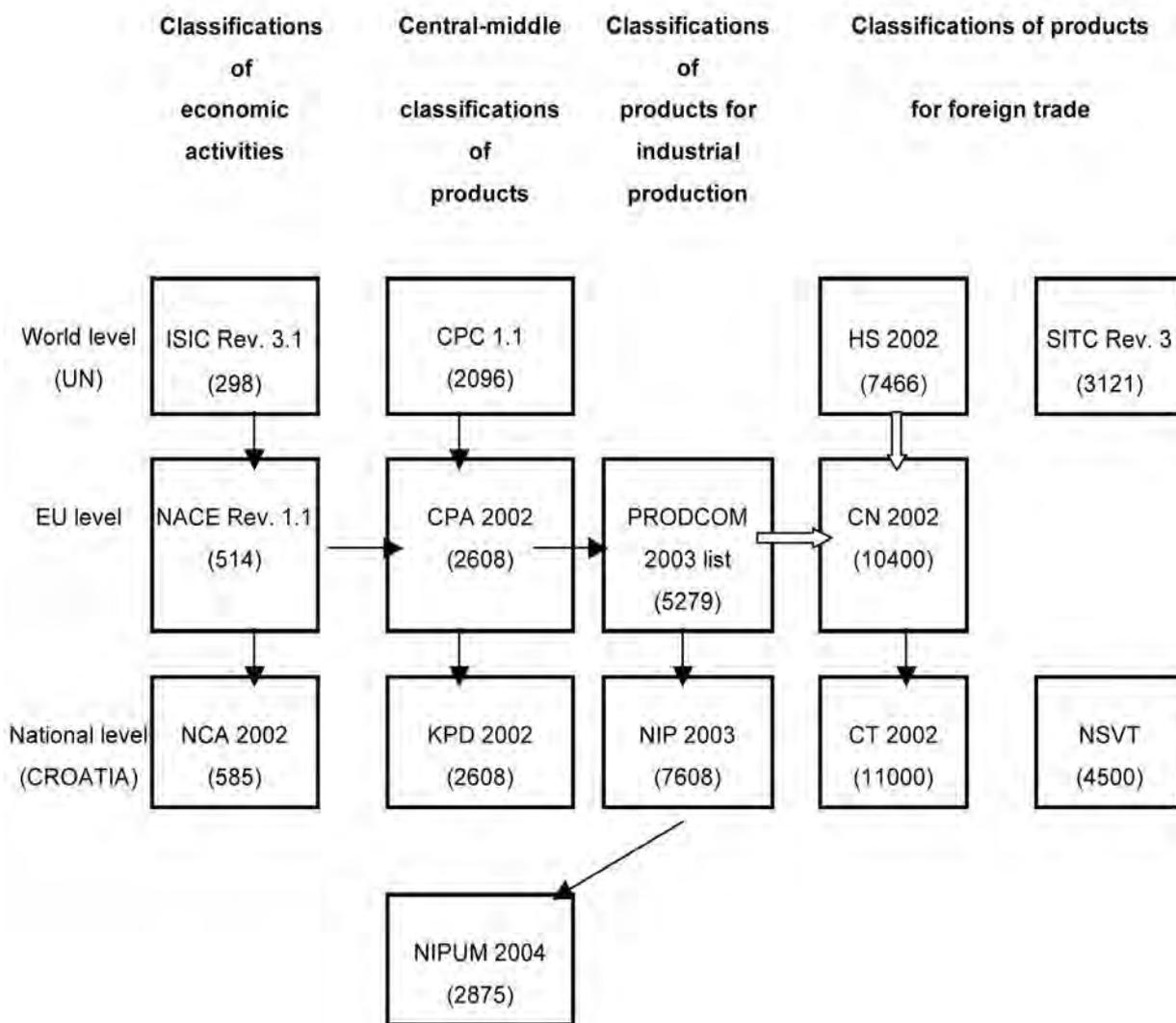
The following classification systems were used in this study:

- National Classification of Activities 1997;
- National Classification of Activities 2002;
- Extended Service Classification for Balance of Payments;
- NACE Rev.2 ;
- ISIC Rev.2 ;
- Correspondence tables between classifications.

Picture 3. Classification of economic activities



Picture 4. Diagram of an integrated statistical classification system, 2002 version.



(ISIC Rev. 3.1. is the abbreviation for the International Standard Industrial Classification of all Economic Activities (in this context the term “industry” includes all economic activities). ISIC is coordinated by the United Nations (UN), and is used for the collection, processing and presentation of statistical data at the world level. ISIC Rev. 3.1 is a hierarchically structured classification that, at its lowest level, comprises 298 classes defined by a four-digit code. It has the status of a reference classification and is more aggregated than the EU NACE Rev. 1.1.²⁸

²⁸ WThe first ISIC version originated in 1948, while the revised versions were published in 1958 (ISIC Rev. 1), 1968 (ISIC Rev. 2), 1989 (ISIC Rev. 3) and 2002 (ISIC Rev. 3.1). It is only the third version (ISIC Rev. 3) that was internationally harmonized within the framework of the ISCAP system, while its updated version represents ISIC Rev. 3.1.

Legal basis: ISIC Rev. 3.1 was approved by the UN Statistical Commission in March 2002. The UN published it in Statistical documents, M series no. 4, Rev. 3.1, New York, 2002. It is used all over the world as a reference document (but has no compulsory status).

NACE Rev. 1.1 is the abbreviation for the general classification of EU economic activities, revised version 1.1. This is a hierarchically structured classification, which, at its lowest hierarchical level, comprises 514 classes defined by a four-digit code. It represents a more detailed European version of ISIC Rev. 3.1, and has the status of a derived classification. NACE Rev. 1.1 is fully in line with ISIC Rev. 3.1 on the level of fields and sections, whereas compliance for the other levels is secured by regrouping groups or classes of NACE Rev. 1.1 into corresponding ISIC Rev. 3.1 levels, as more aggregated classifications. As mentioned earlier, the official classification of activities in Croatia is the National Classification of Activities (NCA) and is used as a norm for the collection, processing and presentation of statistical survey results.

NCA - NCA 2002 is the abbreviation for the National Classification of Activities, updated version 2002. It is the detailed Croatian equivalent of NACE Rev. 1.1, with which it is in full compliance at all levels of classes and all higher hierarchical levels, except at the level of subclasses introduced nationally (national division). NCA 2002 is the hierarchically structured statistical classification of all economic activities that, at its lowest hierarchical level, has 585 subclasses defined by a five-digit code. The first version of NCA entered into force in 1995, under the Act on National Classification of Economic Activities and the Decision on National Classification of Activities of the Government of Croatia.

It was systematically applied in statistical surveys and publications of Croatia from the beginning of 1997 until the end of 2003. It was based on NACE Rev. 1 of the EU, and represents the first harmonized EU classification. The new version of NCA 2002 entered into force by decision of the Government of Croatia at the beginning of 2003, and has been applied in full for statistical purposes since January 1, 2004. Its revised version is based on the updated version of NACE Rev. 1.1 of the EU and is a derivative. It is comparable to the revised world classification of activities, ISIC Rev. 3.1, as well as to NACE Rev. 1.1.²⁹

Identification and classification of copyright-based industries were divided into three iterations:

The first iteration referred to the identification of particular types of copyright-based industries and the classification of the industries within these types according to the WIPO guide. Classifications of economic copyright-based industries are shown in great detail (four-digit code) in the classification ISIC Rev.3.1.

It was necessary to connect in the second iteration the copyright-based industry according to ISIC Rev. 3.1. with the NACE Rev. 1.1 classification. Taking into consideration that the NACE Rev. 1 classification is in line with NCA at the level of classes, the third iteration has also unambiguously determined classifications of copyright-based industry, in line with NCA.

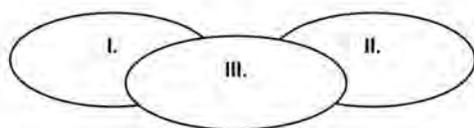
²⁹ The next "large" revision is expected in 2007 (NCA 2007) within the framework of a revised world revision of integrated statistical classifications, at the same time as the planned revision of NACE Rev. 1.1.

Legal basis: NCA 2002 entered into force under the Act on the National Classification of Economic Activities (OG No. 98/94 dated December 31, 1994) and the Decision on National Classification of Activities of the Government of Croatia 2002 (OG No. 13/03 dated January 27, 2003). The structure of the classification of NCA 2002 was set out in the Annex to the Decision.

Picture 5. Diagram of the correlation between WIPO's methodology and the statistical system of Croatia

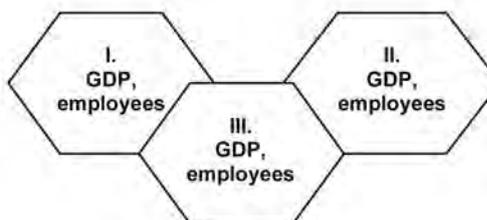
WIPO

CRR-based industries according to ISIC Rev. 3.1. i NACE Rev 1.1



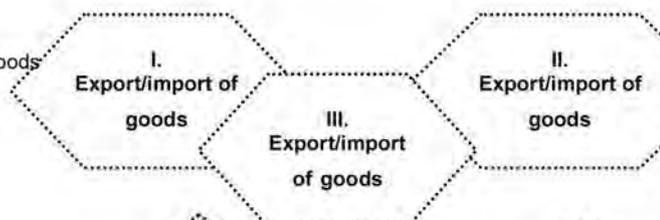
NCA, ISCO

GDP, gross output, Number of employees



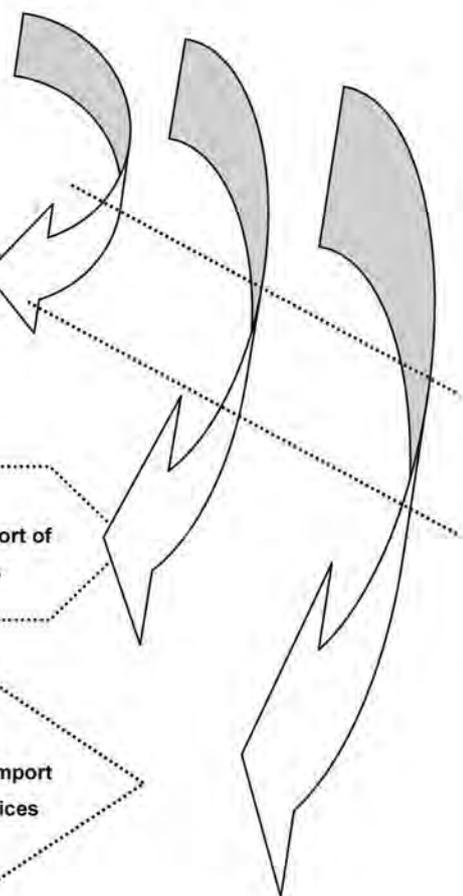
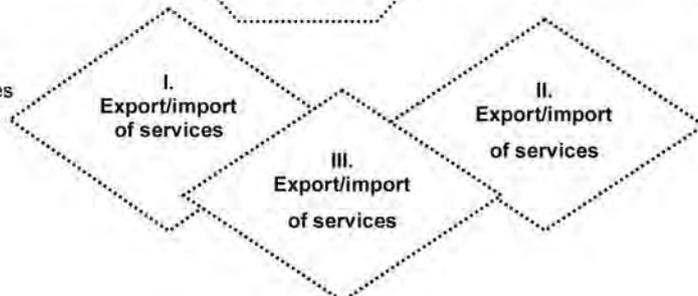
CN

Export/import of goods



EBOPS

Export/import of services



3.5. Methodological principles for the compilation of essential economic indicators

The basic methodological framework for the measurement of the economic contribution of copyright-based industries in this Study is the WIPO methodological guide. According to the guide, there are three ways of measuring, i.e., three essential indicators determining the economic contribution of industries based on copyright legislation. These are the value added, employment rate and foreign trade. This Study measured the following economic indicators for the four types of industries based on copyright and related rights in 2002 and 2004:

- gross output (production);
- gross domestic product;
- number of employed;
- import of goods and services;
- export of goods and services.

3.5.1. Gross output and gross domestic product of CBIs

In analyzing the value of gross production (output) and gross value added of copyright-based industries, this study used data from the Central Bureau of Statistics. This is based on the methodology of the UN System of National Accounts – SNA 1993 – and the European System of National Accounts – ESA 1995, and calculated on the basis of available statistical data for the years 2002 and 2004, according to the National Classification of Activities 1997, i.e., 2002 at the division level at current and constant prices by the production and consumption method.

Gross Domestic Product (GDP) represents the value of all goods and services produced by resident³⁰ units for a particular period, in most cases for a period of one year. According to the production method, GDP is given as the sum of values added of all resident producers at basic prices plus taxes minus subsidies on products or, in other words, as the difference between gross production and intermediate consumption. In contrast to the production method and according to the expenditure method, GDP represents the sum of final expenditures at purchase prices (including the export of goods and services evaluated by the FOB principle) less imports of goods and services evaluated by the FOB principle.

The economic contribution of copyright-based industries in this Study (calculation of gross output, intermediate consumption and gross value added) was calculated on the basis of the calculation of GDP according to the production method. As mentioned earlier, the calculation is based on the division level of NCA, whereas for the purpose of this study a model for the measurement of gross production, intermediate consumption, gross value added and gross domestic product, as well as the number of persons employed and foreign trade at the class level of NCA (four-digit NCA code) was made. A model was produced in the SAS program (SAS Base Module) and consists of procedures by which the gross value of production, intermediate consumption, gross domestic product and number of employed is calculated using the four-digit NCA code, and also procedures by which the calculated results are transformed from NCA 1997 and 2002 into the classification of activities dealing with copyright from the WIPO methodological guide.³¹

Gross output (production) is defined as the market value of goods and services produced during an accounting period, usually a period of one year, including unfinished products (stocks) and products for personal use. According to ESA 1995 and SNA 1993, gross output (production) should be valued at basic prices.³²

Intermediate consumption represents the value of products and services which are transformed, used up or consumed in the accounting period, in order to produce other products and services.

It comprises the costs of raw and other materials, energy consumption, small inventory, current maintenance, cost of services, reimbursement of employees for traveling, and other similar operating expenses. The goods and services used for intermediate consumption are valued by the purchaser's prices³³ at the time they enter the production process.

³⁰ See: ESA 1995, paragraph 1.30.

³¹ See: "WIPO methodological guide", Appendix II, p. 75.

³² The basic price is the amount receivable by the producer from the purchaser for a unit of a good or service produced as output less any tax payable for this product unit calculated as a consequence of production or sales (i.e., tax on products), and plus any subsidy receivable on that unit as a consequence of its production or sale (subsidies on products). Transport services, for which the producer makes out a separate invoice, are not included in the basic price. Transport services which the producer puts on the same invoice are included, even though this is an entry indicated separately in the invoice (ESA 1995, paragraph 3.48).

³³ The purchaser's price is the amount paid by the purchaser, and which includes all taxes minus subsidies on products (but does not exclude any deductible taxes on products, such as VAT), transport charges which the purchaser pays separately to take delivery, and excludes all amounts and out-of-season discounts, interests or services paid by credit arrangements, special payments generated as a result of a lack of payment by the deadline agreed upon during the purchasing process.

The value added in basic prices, as the increase in the value of production, equals the difference between the gross output in basic prices and intermediate consumption in purchaser's prices. It can be expressed as gross value added where it includes the value of fixed capital consumption.³⁴ When all gross values added by activities are added up and at the level of the whole economy all taxes less subsidies on production and imports, except other taxes less subsidies on production,³⁵ are attributed separately and financial mediation services measured indirectly (UFPIM), the result is the value of gross national product in terms of purchaser's prices.

Considering that the value of taxes and subsidies as well as UFPIM in official GDP data is still not allocated to individual activities, for the purposes of this Study as well as calculation of GDP for industries dealing with copyright and related rights, the categories mentioned have been allocated according to the structure of value added by NCA activities.

It is important to note that the available statistical data, which serve as inputs for the calculation of the aforementioned macroeconomic aggregates, are collected from business subjects listed as institutional units under the NCA activities, and not as a simple type of activity units. This means that companies are classified in the same activity group regardless of their production variety, compared with the principle of "simple type of activity", which classifies all institutional units producing the same (homogeneous) product in the same group.

Based on the assumption that these units (trade companies, enterprises, holdings, units of local government and self-government, units of central government, non-profit institutions, etc.) have made transactions, they are entered in the Register of Business Entities of the Central Bureau of Statistics. During their registration they are assigned their prevailing activity code i.e., the activity which will gain the largest share of its gross value added.

3.5.2. The number of employed in CBIs

To calculate the number of employed, this Study has used data from the social statistics sector found within the Central Bureau of Statistics. Data on persons in employment, expressed as an annual average with the situation as at March 31, have been collected from the results of monthly surveys and the annual survey carried out once a year with the situation as at March 31. Data are collected from legal entities regardless of ownership, government bodies and local and regional self-government authorities on the territory of Croatia.³⁶ The number of employed in legal entities with fewer than 10 employees, and for who no reports have been submitted, is assessed and added to the total number of those employed by legal entities. Further on, the research covers the persons employed in crafts and free activities and the owners and persons enrolled with the Croatian Institute for Health Insurance (HZZO). The data evaluated on those employed in the defense and the police forces are also included in the total number of employed for 2002, while the number of employed based on the given reports of the competent Ministries is included for 2004.

³⁴ Fixed capital consumption is the imputed value of property consumed during an accounting period for reasons of use, destruction and usual accidental damages.

³⁵ Other taxes on production include income payroll taxes (earnings) and taxes on capital, and their amount is not dependent on business results (e.g., firm tax, fees, dues, etc.)

³⁶ Data are collected through reports completed by legal entities according to records of persons in employment. Data on persons in employment in crafts and trades and freelancers were collected by regular quarterly surveys submitted by the HZZO with the situation as at March 31, June 30, September 30 and December 31. Since March 1998, these data have been collected monthly and produced on the basis of the Register of Active Beneficiaries of Pension Insurance.

Data on persons in paid employment with legal entities include those in permanent employment, irrespective of the kind of employment and number of working hours. Data are collected according to the territorial principle at the town/municipality level and the kind-of-activity principle at the level of the NKD 2002 subclasses.³⁷

Persons in employment are persons in paid employment, which includes persons who have signed a work contract with an employer for a fixed or unspecified period of time, irrespective of the type of ownership and whether they work full time or part time. Included in the category of persons in paid employment are trainees, persons on maternity leave or sick leave or absent from work for other reasons, until cessation of employment. Also counted as persons in employment are self-employed persons with their own trading company, enterprise, craft or freelancers.

Professional attainment is the highest level of education acquired by a person upon completing an appropriate school or course, sitting for exams or receiving recognition based on proof of professional attainment in a business entity.

Full-time work lasts 40 hours a week, if not otherwise proscribed by law, collective agreement or work contract. Part-time work is undertaken where the quantity of work is such that it does not need full working time to be completed. Part-time work is undertaken where the nature of work is such that the employee cannot be protected from harmful effects by safety measures at work. Hours actually worked include hours of real work, hours of waiting, stoppage or interruption at work for which employees are not responsible.

Calculation of the number of employed as an indicator of the economic contribution of the copyright-based industries is based in this Study on data of the model survey described, in relation to the NCA class (four-digit NCA code).

³⁷ Data on persons in employment in crafts and trades and freelancers cover owners and employees registered with the HZZO. Until 1991, the data were collected on a half-yearly basis, not including owners in crafts and trades and freelancers.

The above-mentioned surveys do not include persons in employment in the defense and police forces, or persons performing their activities on private farms. Since 1998, the number of persons in paid employment has contained estimated data on persons in employment in the defense and police forces, while since 2004, these data have been included on the basis of reports submitted by competent ministries.

Since 1996, data have contained an estimate of the number of persons in employment in legal entities with up to 10 employees for whom reports were not submitted. The estimate was made on the basis of statistical financial reports collected and processed by the Financial Agency. Data on the number of persons in employment by type of professional attainment, kind of employment, age and working hours do not include an estimate of the number of persons in employment in legal entities with up to 10 employees for which reports were not submitted. Until 2003, this was also true for the number of persons in employment in the defense and police forces, as processing according to the above-mentioned characteristics is done only on the basis of the reports submitted. The exception to this approach refers to data on the number of persons in employment by type of ownership that includes these data.

Up to 2003, the estimate of the number of persons in employment in legal entities with fewer than 10 persons in paid employment was assigned to private ownership and persons in employment in the police and defense forces to State ownership. Since 2004, the number relating to persons in employment in the defense and police forces has been included in the processing on the basis of reports submitted by the Ministry of the Interior and the Ministry of Defense.

Until 1998 the statistical survey of data on persons in employment in crafts and trades and freelancers was conducted by assimilating the data on users of health insurance from HZZO.

Since March 1998 these data have been collected from HZZO on a monthly basis. In order to ensure the presentation of these data according to the NCA, types of occupations and professions have been matched with a suitable activity.

3.5.3. Foreign trade of CBIs

To calculate foreign trade (exports and imports of goods) for the years 2002 and 2004, i.e., for export and import of copyright-based industry goods, this Study uses data from business statistics from within the CBS. Until the end of 1999, data sources for foreign trade statistics were customs declarations on imports and exports of goods. Since January 1, 2000, the new Customs Act³⁸ has been in use in Croatia, which introduces a new document – the Single Administrative Document.

The content of the Single Administrative Document is adjusted to its multiple uses, i.e., it is completed with data that are important for the customs clearance process, as well as data needed by statisticians and other users. The Customs Administration (CA) of the Ministry of Finance of Croatia is responsible for collecting and verifying the validity of single administrative documents.

CBS takes over from the CA single administrative documents reviewed, then performs further statistical analysis and publishes them according to the basic methodological recommendations of the UN Statistical Office.³⁹

Moreover, the approach to statistical data processing for exports and imports has been changed since January 1, 2000, except for the introduction of the new Customs Act and the new customs administration during the customs procedure.⁴⁰

For the purposes of comparison, data from 1991 until 1999 were analyzed in the same way. The scope of the statistics for the trade in goods with foreign countries comprises all goods that are exported from, or imported to, Croatia. Exports include all goods exported from Croatia deriving from domestic production or internal commercial trade, whereas imports cover all goods imported from foreign countries for the purposes of consumption in Croatia or internal production.

Besides commercial transactions (that includes charges), the statistics also cover goods in which trade, that is exports and imports, is effected without the payment of the counter value. Since 1990, data on foreign trade have included both imports and exports based on further processing (finishing, treatment and processing). After the implementation of the new Customs Law, this further processing is called inward and outward processing. In inward and outward processing, the total value of goods is monitored. Thus, in the case of an active transfer, the value of materials imported for inward processing is the full value of goods exported after inward processing (including the value of imported material, the value of domestic material and the value of domestic services).⁴¹

All the data on exports and imports are expressed in values. The value of goods is determined on the basis of original documents of business entities (contracts, accounts).

The values expressed are real values achieved at the time deals were contracted (invoice values), which are then further recalculated into the free Croatian border parity. The export values are calculated on the basis

³⁸(OG No. 78/99, 94/99, 117/99, 73/00, 92/01 and 47/03).

³⁹(International Trade Statistics, Concepts and Definitions; Series M, No. 52, Rev. 2, Statistical Office of the United Nations, New York, 1996).

⁴⁰According to the new procedure, only those declarations that have the acceptance date (customs clearance) in the customs house/branch office from that month are dealt with.

⁴¹These statistics do not include temporary export and import of goods that are returned to the owner in an unaltered state, fuel supply of domestic motor vehicles abroad and foreign motor vehicles in the country, supplying Croatian diplomatic missions abroad, temporary exports and imports for repair, personal luggage and tourist movables, re-export (except re-export for further processing) and commercial samples of small value.

of the free on board parity.⁴² Imports are calculated according to the CIF parity.⁴³ Since 1986, the official data on foreign trade have been expressed in the national currency and US dollars.⁴⁴

The data on exports and imports are shown according to NCA 2002. Data by activities are the result of correlation tables between the Nomenclature of Customs Tariffs (NCT) and the corresponding NCA 2002 classes.

These data on exports and imports by type of activity are obtained depending on the activity involved in the production of a certain product, that is the one that product originates from. The NCT of Croatia has been brought into line with the harmonized system at a six-digit level and with the Combined Nomenclature at an eight-digit level, while a national nomenclature has been established at a 10-digit level.⁴⁵

For the collection of data on the export/import of goods and clearing goods through customs, the Harmonized Commodity Description and Coding System of the International Customs Cooperation Council is referred to, and the national NCT based on it, respectively.⁴⁶

In this Study, calculation of exports and imports as an indicator of the economic contribution of the copyright-based industries is based on data from the model survey described, and the NCA class level (four-digit NCA code). Values of imports and exports in copyright-based services for 2002 and 2004 are calculated, based on the balance of payments data (extended version) of the National Bank of Croatia.

3.6. Copyright factor

The "Copyright factor" represents the percentage-amount of copyright-based activity in certain industries. It shows the extent to which certain industries are dependent on copyright and related rights. Based on the WIPO Guide, the copyright factor is a weight which, depending on the industry, varies between 0 and 1.

In industries where the production of goods and/or services is based completely on copyright, the copyright factor equals 1. On the other hand, in those industries where the production of goods and/or services has nothing to do with copyright and related rights, the copyright factor equals 0. For all other activities, it is necessary to determine the copyright factor.

The value assigned to the copyright factors is of the utmost importance since their influence on the results obtained is direct and wide-ranging. It is also clear that the value of these weights is subject to subjective assessment by researchers. Critics might say that these two facts lead to the question of the objectivity of the methodology as well as the reliability of results.

⁴² This means that the invoice value is reduced for transportation and other costs incurred from the Croatian border to the place of delivery abroad, if it is agreed that goods are delivered abroad. If it is agreed that delivery will take place in the country (Croatia), the invoice value is increased by the costs incurred from the place of delivery in Croatia to the Croatian border.

⁴³ This means that the invoice value is increased by transportation and other costs incurred from the place of delivery abroad to the Croatian border, if it is agreed that goods are delivered abroad. If it is agreed that delivery will take place in the country (Croatia), the invoice value is reduced for the costs incurred from the Croatian border to the place of delivery in Croatia.

⁴⁴ The amounts expressed in foreign currency are converted into kuna and US dollars using current daily exchange rate lists, as determined by the Croatian National Bank, valid on the day customs duties are levied, that is, on the day when the single administrative document has been accepted. The average exchange rate is used. Changes in the parity of the national currency according to the exchange rate lists for certain periods are shown by the average exchange rate of the US dollar in kuna for these periods.

⁴⁵ Since January 1, 2002 the Combined Nomenclature (OG No. 113/01, 142/02, 184/03 and 165/04), the EU customs and statistical classification of products with further national breakdown, has been used in data collection.

⁴⁶ Since January 1, 1988, a revised nomenclature of the Standard International Trade Classification (third revision) has been implemented, which is more complex than previous ones and coordinated as closely as possible with the Harmonized System and the Nomenclature of Customs Tariffs. The change in the Nomenclature of Customs Tariffs has affected the grouping of data by activities and the SITC, since these items result from the classification of products from the Nomenclature of Customs Tariffs by correlation tables.

It should be emphasized that these kinds of assessments and similar ones are very common in almost all economic research of this type just as they are common in research focused on the evaluation of intangible assets. No better, or more widely accepted, methods have been developed so far or are not known to the authors of this Study. For a more detailed econometric elaboration of copyright factors, see the 2004 work by R. Watt.⁴⁷ It is crucial in these kinds of assessments to follow the standards accepted by as many researchers as possible at the international level, and to choose a more conservative approach.

The copyright factor of core copyright industries, according to the WIPO guide, is of 1. This means that all activities classified under this group are 100 per cent connected to copyright. This was the basic assumption of the calculation of the economic contribution of core copyright-based industries in this Study. For all the other industries, in other words for the partial, interdependent and non-dedicated industries, it was important to calculate the values of the copyright factor. Considering the fact that the economic contribution of the interdependent industry is significantly greater than the contribution of partial and non-dedicated industries, the Guide recommends a more detailed analysis and the calculation of the copyright factor for that particular industry.

The Guide suggests two possible approaches to determining the copyright factors of the interdependent copyright industries, in case there are not enough data sources available. The first approach is based on the reproduction of those data that are missing for the calculation from an identical study implemented in some other country whose economy and other relevant social factors can be compared to the corresponding factors for the country which conducts its research. This approach is based on the assumption that the structure of the production, consumption and productivity of work in particular activities is very similar in both countries.

The other approach is represented by the calculation of the copyright factors using a statistical method of a stratified sample. In other words, it is calculated by means of a direct survey on a sample of five or more (depending on the size of the industry) economic subjects – small, medium-sized or large companies, in order to obtain the following information: the level of costs related to copyright payment, the number of employed (full time or part time) in creative activities, the contribution of sales income based on copyright, the number of organizational units performing creative tasks, a personal estimate from a company of the dependence of production on copyright, etc. The questions asked should be specific, and consider a particular kind of copyright-based industry and a particular economic indicator (value added, employment or foreign trade). Based on the collected data, the average values of the copyright factor for a particular activity can be calculated.

In view of this, the copyright factors for the interdependent industries were taken from the Hungarian study, based on the assumption, or even the limits given in advance, that the total economic contribution of the interdependent, partial and non-dedicated industries does not exceed 30 per cent of the total contribution of copyright-based industries.

For the third category of partial copyright industries, weights were taken from the Hungarian study. The reason for this is that the results of this study are for the greater part compared to the results of the Hungarian study which has elaborated the assessments of most former studies in the determination of subject weights. There were not enough data sources available for a possible determination of special values of copyright factors for this group for Croatia.

⁴⁷ Richard Watt, A comment: The "Copyright factors", Review of Economic Research on Copyright Issues, 2004, vol. 1(1), pp.71-78.

Copyright factors in this study for the fourth category of non-dedicated industries have been calculated using the method applied in the American study. This method is based on the assumption that the value of copyright factors for non-dedicated industries, that is not directly related to copyright, equals the sum of the core, interdependent and partial copyright industries in the first three GDP categories.

In other words, it has been assessed that the contribution of industries from the first three groups equals their contribution to all other sectors. As a result, this weight will vary each year for the activities of the last category depending on the relative contribution of industries from the first three categories to the total GDP. The value of copyright factors in Croatia in 2002 was 0.003 and in 2004, 0.004.

Table 2. Copyright factors of CBIs in CROATIA in 2002 and 2004

Description	Copyright factor	
	2002	2004
I. Core copyright-based industries		
Newspapers and literature	1.000	1.000
Music, theatre productions, opera	1.000	1.000
Motion pictures and video	1.000	1.000
Radio and TV	1.000	1.000
Photography	1.000	1.000
Software and databases	1.000	1.000
Visual and graphic art	1.000	1.000
Advertising services	1.000	1.000
Professional organizations dealing with copyright and related rights	1.000	1.000
II. Interdependent copyright industries		
TV-sets, radio receivers, VCRs, CD players, DVD players etc.	1.000	1.000
Computers and equipment	1.000	1.000
Musical instruments	1.000	1.000
Photographic and film-making equipment	1.000	1.000
Photocopiers	1.000	1.000
Blank recording media	1.000	1.000
Paper	1.000	1.000
III. Partial copyright industries		
Apparel, textiles and footwear	0.005	0.005
Jewelry and coins	0.250	0.250
Other crafts	0.400	0.400
Furniture	0.050	0.050
Household goods, china and glass	0.005	0.005
Wall coverings and carpets	0.020	0.020
Toys and games	0.500	0.500
Architecture, engineering and surveying	0.100	0.100
Interior decoration	0.100	0.100
Museums	0.500	0.500
IV. Non-dedicated copyright industries		
Trade	0.003	0.004
Transport	0.003	0.004
Communication	0.003	0.004

4. Economic Contribution of CBIs In Croatia in 2002 and 2004

4.1. Aggregated indicators of the economic contribution of CBIs in 2002 and 2004

Copyright-based industries made a significant economic contribution to the overall results of the Croatian economy in 2002 and 2004, measured in terms of the values of the chosen indicators of their economic performance.

In 2002, the total gross output of all four categories of copyright-based industries amounted to 15.7 billion kuna which represents a proportion of 4.8 per cent of the total gross output of the national economy. Gross production arising from the first category – core copyright industries, as a part of copyright-based industries, amounted to 10.8 billion kuna, which constituted 3.29 per cent of the gross output of the national economy. The total gross value added of copyright-based industries amounted to eight billion kuna, or 4.44 per cent of the gross domestic product of Croatia. The total number of employed in CBIs was 54,485 or 4.23 per cent of the total number of employed in Croatia in 2002.

The indicators for 2004 show, despite an absolute increase, somewhat decreased relative values, with the exception of the number of employed which has increased in absolute and relative terms.

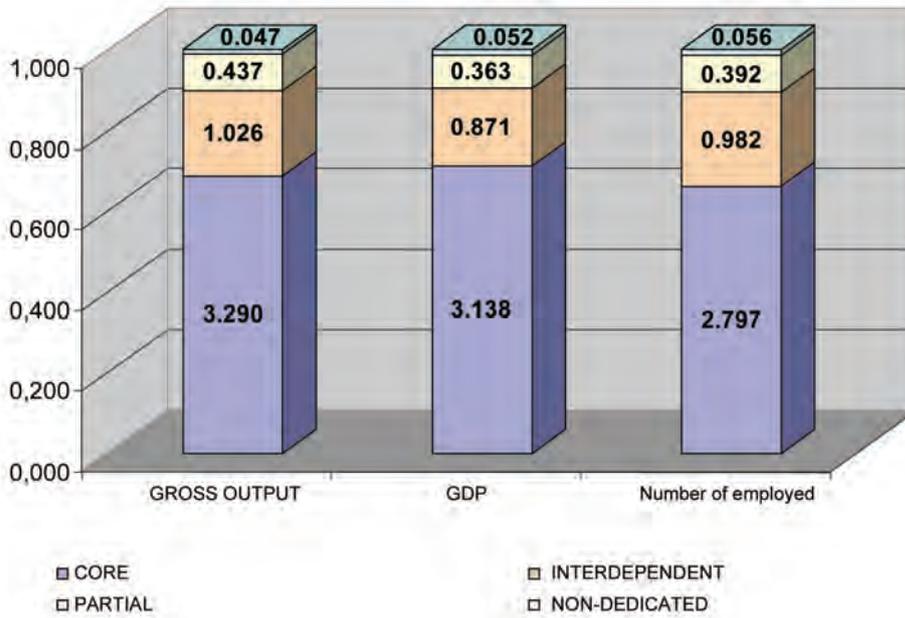
In 2004, the copyright-based industries generated in Croatia 19.18 billion kuna of gross output which made up 4.7 per cent of the GVP of the national economy, or 9.18 billion kuna of the gross value added, i.e., 4.3 per cent of the GDP of the economy of Croatia. The number of employed was 62,936 or 4.65 per cent of the total number of employed in Croatia in 2004.

As expected, within the total contribution of all CRR industries, the greatest contribution in relative terms was made by the activities from the first category – core copyright industries. For instance, their contribution to GDP amounted to 3.14 per cent in 2002, or three per cent in 2004, and the contribution measured by the number of employed rose from 36,054 or 2.8 per cent in 2002 to 43,641 or 3.22% in 2004.

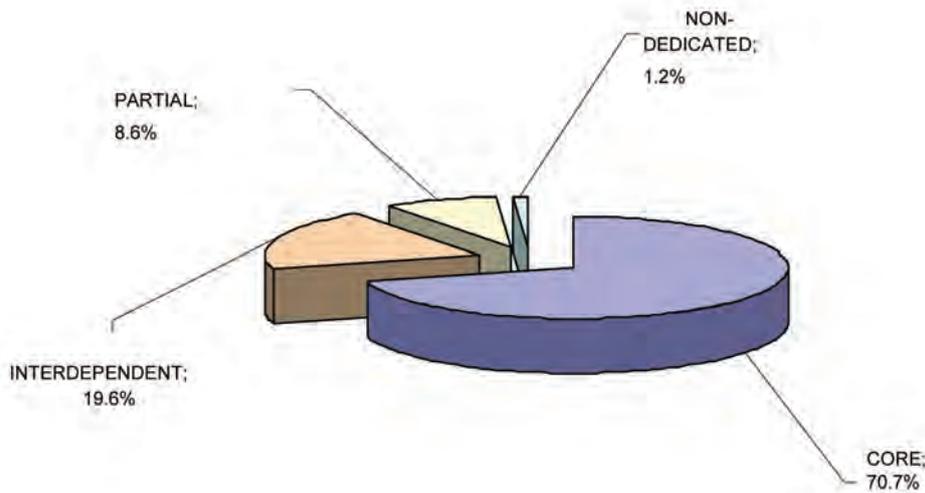
Table 3. Economic contribution of CBIs in Croatia in 2002

INDUSTRIES	GROSS OUTPUT thousand kuna	%	GDP thousand kuna	%	Number of employed	%
CORE COPYRIGHT	10,789,712	3.290	5,686,752	3.138	36,054	2.797
INTERDEPENDENT COPYRIGHT	3,364,555	1.026	1,579,157	0.871	12,661	0.982
PARTIAL COPYRIGHT	1,434,747	0.437	658,015	0.363	5,049	0.392
NON-DEDICATED COPYRIGHT	154,159	0.047	93,748	0.052	721	0.056
TOTAL COPYRIGHT- BASED INDUSTRIES	15,743,172	4.800	8,017,672	4.424	54,485	4.227
NATIONAL ECONOMY	327,966,373	100.000	181,230,888	100.000	1,288,902	100.000

Graph 1. Economic contribution of CBIs in Croatia in 2002 (%)



Graph 2. GDP structure of copyright-based industries in Croatia in 2002 (%)

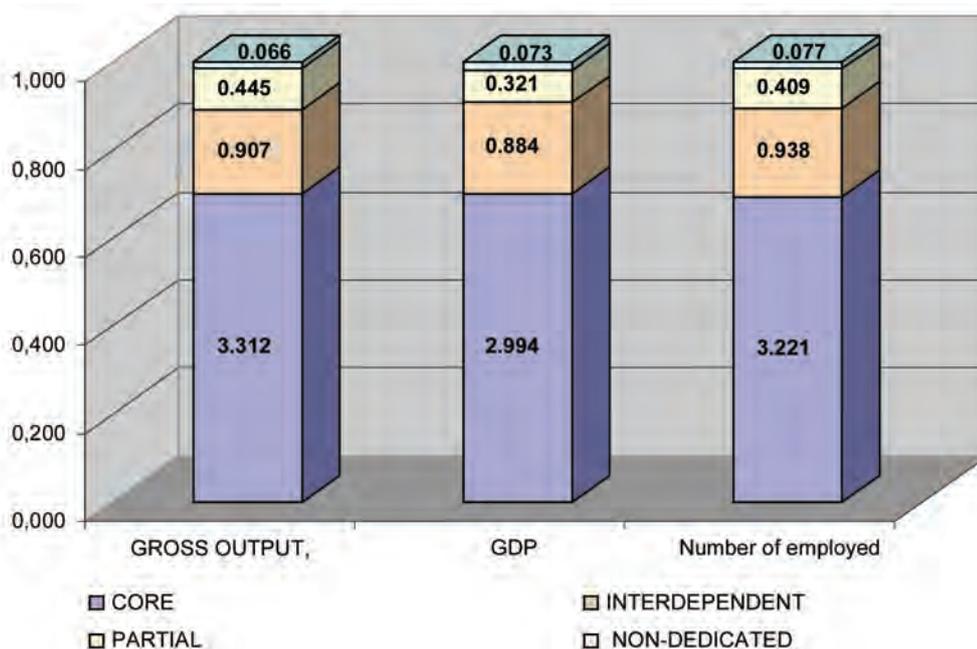


The GDP structure of copyright-based industries represents the level of the contribution of particular types of industries to the creation of value added. In 2002, the core copyright industries generated just over 70 per cent of GDP of all copyright-based industries, while the other industries together generated the remaining 30 per cent. In terms of the production of gross output and employment, this proportion amounts to 69 per cent, i.e., 66 per cent.

Table 4. Economic contribution of CBIs in Croatia in 2004

INDUSTRIES	GROSS OUTPUT, in thousands of kuna	%	GDP in thousands of kuna	%	Number of employed	%
CORE COPYRIGHT	13,432,681	3.31	6,436,405	2.99	43,641	3.22
INTERDEPENDENT COPYRIGHT	3,676,824	0.91	1,900,623	0.88	12,710	0.94
PARTIAL COPYRIGHT	1,802,993	0.44	689,457	0.32	5,546	0.41
NON-DEDICATED COPYRIGHT	268,757	0.07	156,901	0.07	1,039	0.08
TOTAL COPYRIGHT BASED INDUSTRY	19,181,254	4.73	9,183,386	4.27	62,936	4.64
NATIONAL ECONOMY	405,576,439	100.00	214,983,101	100.00	1,355,000	100.00

Graph 3. Economic contribution of copyright-based industries in Croatia in 2004 (%)



In 2004 and in 2002, the total gross output of copyright-based industries maintained almost the same proportion (4.7 per cent) of the total value of production of the national economy. It amounted to 19.2 billion kuna. Within the copyright-based industries, the gross value (representation) of core copyright industries amounted to 13.4 billion kuna, which made up 3.31 per cent of the total gross output of the national economy.

Total gross value added of the copyright-based industries was 9.2 billion kuna, or 4.27 per cent of the GDP of Croatia. The total number of employed in 2004 in copyright-based industries amounted to 62,936 or 4.64 per cent of the total number of employed in Croatia. As expected, the greater part of this number of employed was in the core copyright industries (43,641) or 3.2 per cent of the total number of employed.

Likewise in 2002, the greatest proportion within the copyright-based industries was held by the core copyright industries. Based on their contribution to GDP, core copyright industries generated just over 70 per cent of the total value added of all copyright-based industries, whereas the other industries together represented a proportion of approximately 30 per cent.

The economic significance of core copyright industries is very similar when measured in terms of the number of employed.

Graph 4. GDP structure of CBIs in Croatia in 2004 (%)

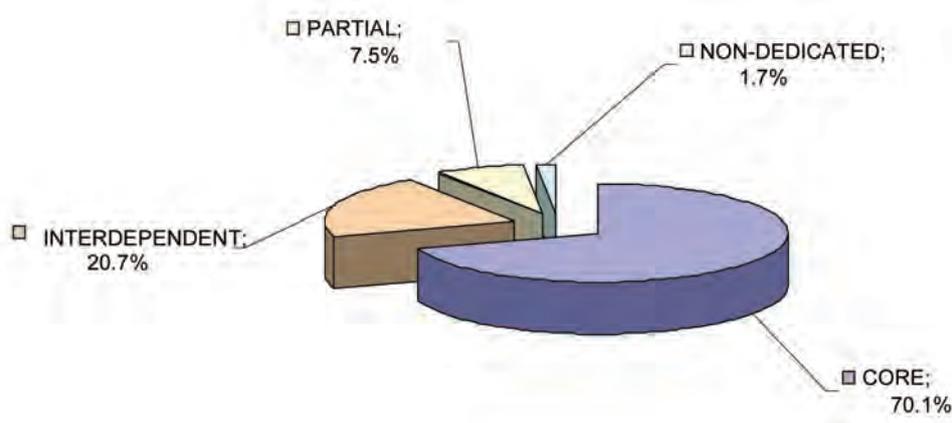
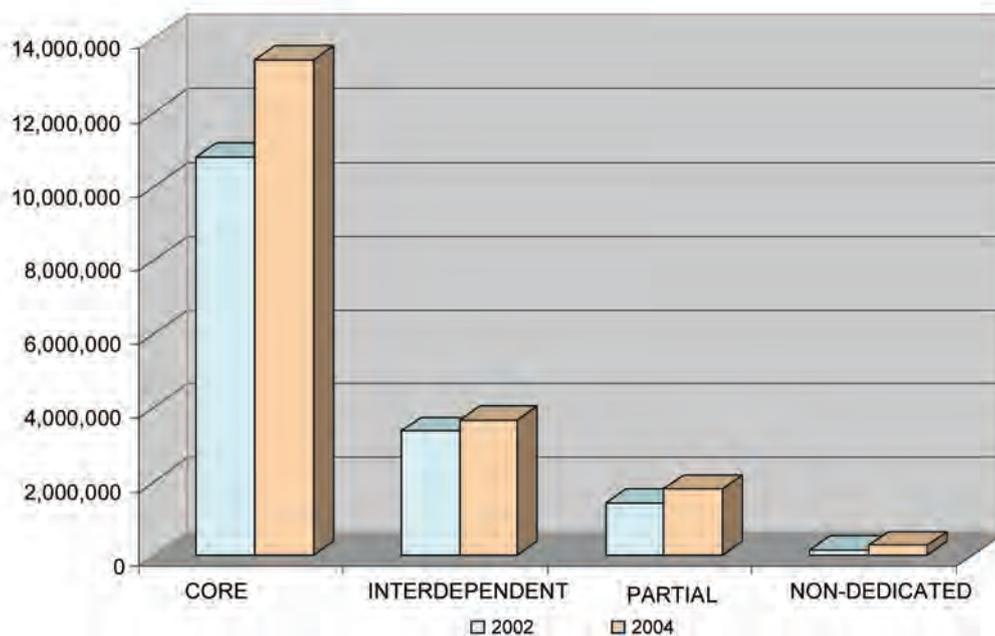


Table 5. Gross output, gross domestic product and number of employed in CBIs in Croatia in 2002 and 2004

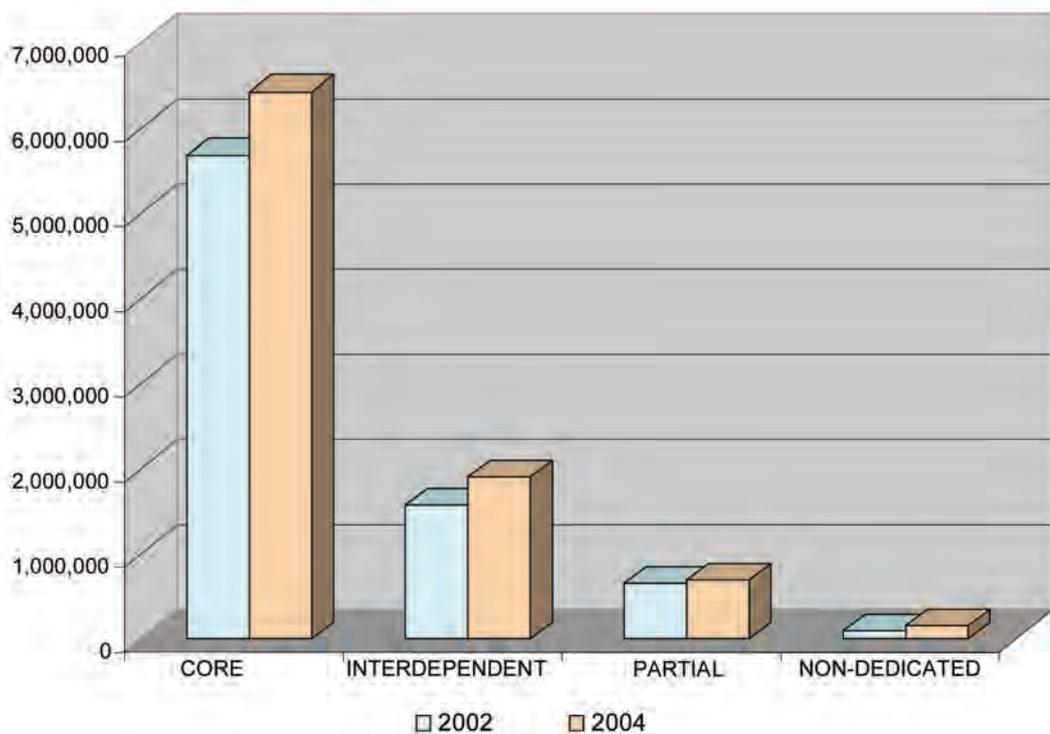
INDUSTRIES	2002			2004		
	Gross output in thousand kuna	Gross domestic product in thousand kuna	Number of employed	Gross output in thousand kuna	Gross domestic product in thousand kuna	Number of employed
CORE	10,789,712	5,686,752	36,054	13,432,681	6,436,405	43,641
INTERDEPENDENT	3,364,555	1,579,157	12,661	3,676,824	1,900,623	12,710
PARTIAL	1,434,747	658,015	5,049	1,802,993	689,457	5,546
NON-DEDICATED	154,159	93,748	721	268,757	156,901	1,039
TOTAL COPYRIGHT-BASED INDUSTRIES	15,743,172	8,017,672	54,485	19,181,254	9,183,386	62,936



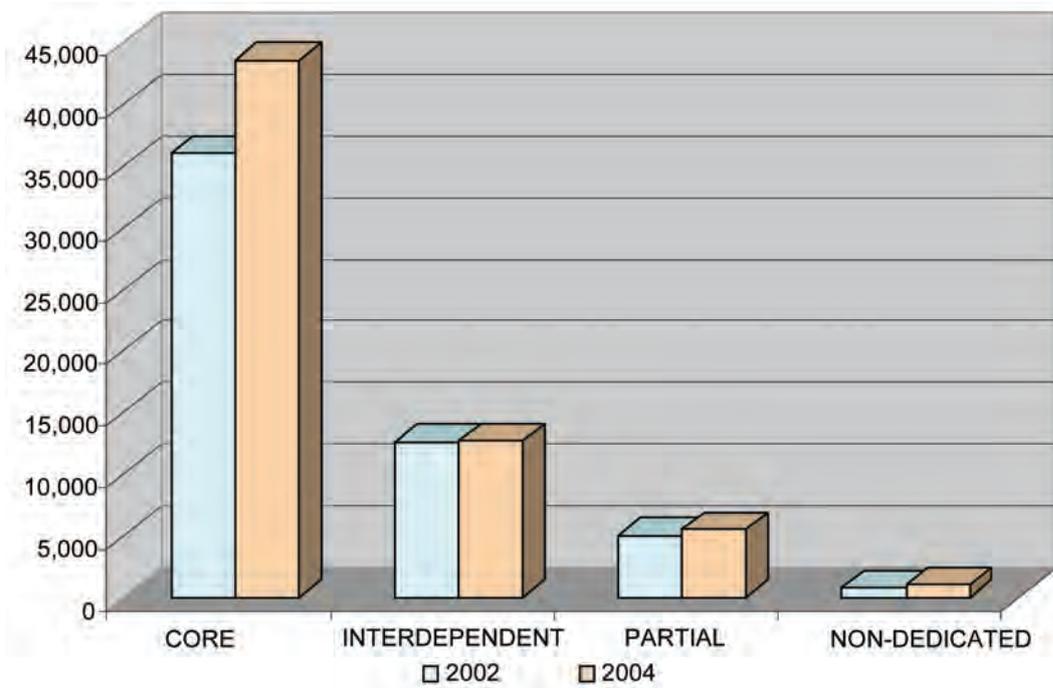
Graph 5. Gross output of CBIs in 2002 and 2004 (thousand kuna)



Graph 6. Gross domestic product of CBIs in 2002 and 2004 (thousand kuna)



Graph 7. Number of employed in CBIs in 2002 and 2004

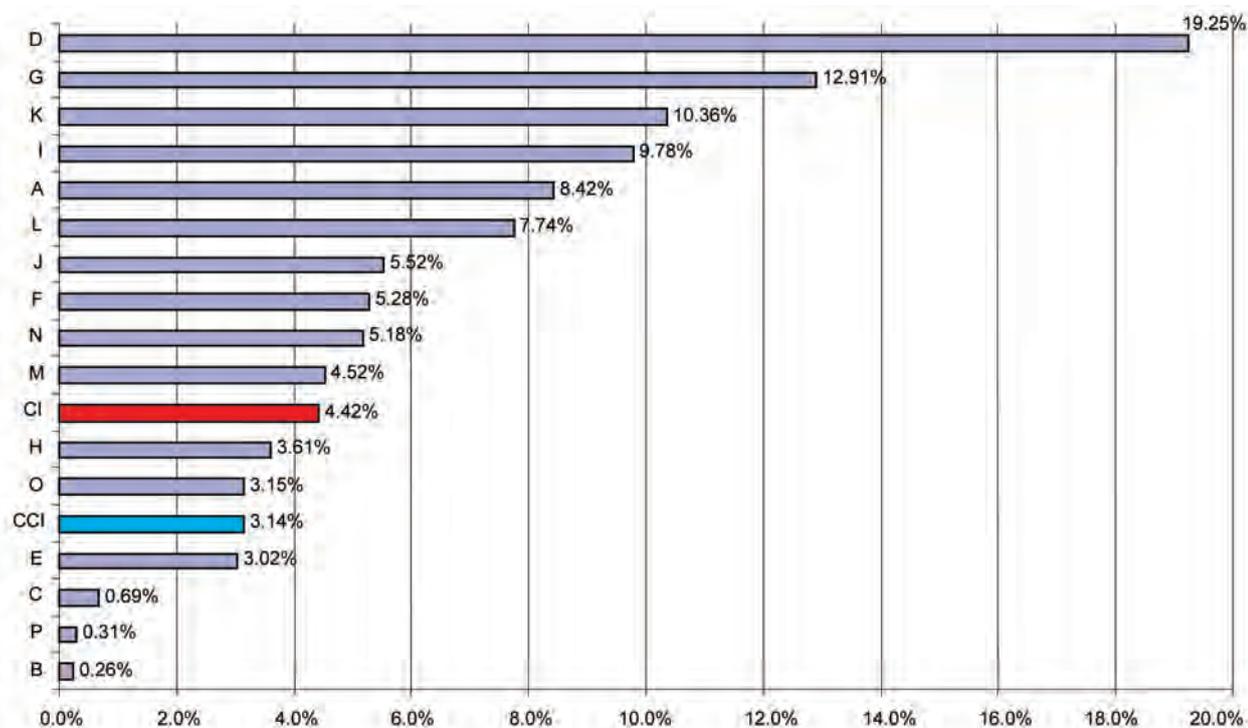


4.2. Comparison with other sectors

The best way to emphasize the role and significance of copyright-based industries in Croatia in terms of economic performance and employment is by making a comparison with other sectors and industries of the national economy (Graphs 8 and 9).

The proportion of copyright-based industries of total GDP for 2002 amounted to 4.42 per cent, whereas the proportion of core copyright industries amounted to 3.14 per cent of GDP. The proportion of GDP of copyright-based industries can be compared to the economic contribution of industries such as education (4.52 per cent); healthcare and social welfare (5.18 per cent); and construction (5.28 per cent). The economic contribution, i.e., GDP, of core copyright industries is higher than the contribution of industries such as electricity, gas and water supply (3.02 per cent); mining and extraction (0.69 per cent); household activities (0.31 per cent); and fisheries (0.26 per cent).

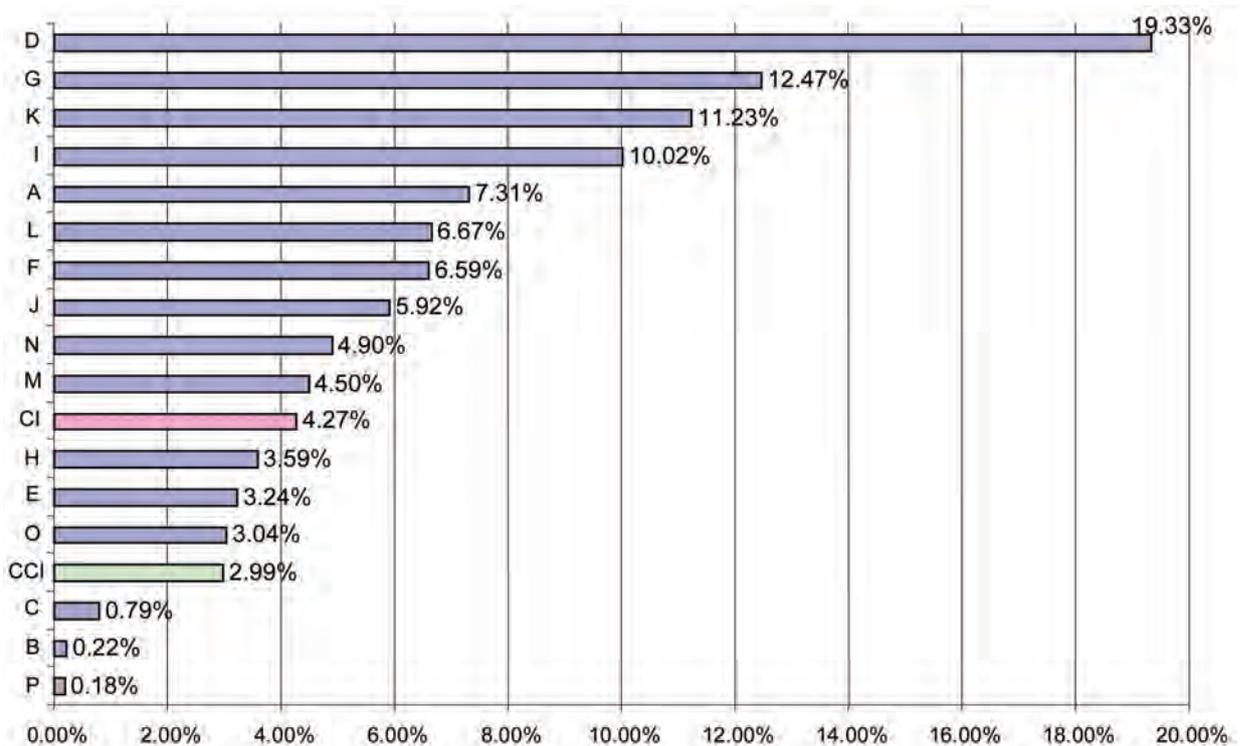
Graph 8. Economic contribution of CBIs in Croatia in 2002 in comparison to other industries according to NCA as a percentage of GDP



Key reference:

- A Agriculture, hunting and forestry
- B Fisheries
- C Mining and extraction
- CI *Copyright industry*
- D Manufacturing
- E Electricity, gas and water supply
- F Construction
- G Wholesale and retail sale
- H Hotels and restaurants
- I Transportation, storage and connections
- J Financial services
- K Real estate activities, rental and business services
- L Public administration and defense; compulsory social security
- M Education
- N Healthcare and social welfare
- O Other social and personal service activities
- P Household activities
- CCI *Core copyright industry*

Graph 9. Economic contribution of CBIs in Croatia in 2004 in comparison to other industries according to NCA as a percentage of GDP



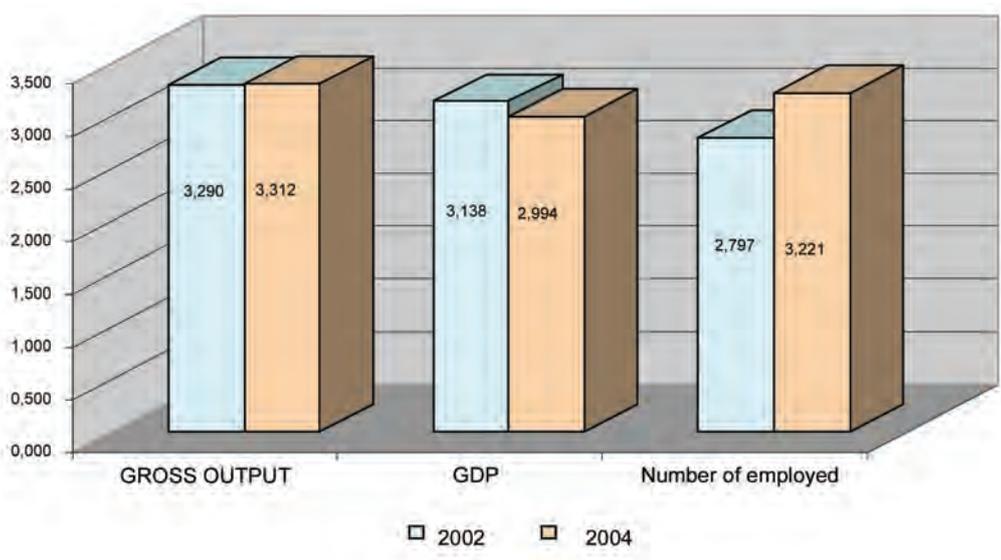
Graph 9 represents the proportion of GDP of copyright-based industries and the proportion of GDP of core copyright industries in Croatia in 2004. This proportion of copyright-based industries amounted to 4.27 per cent, whereas the proportion of core copyright industries was 2.99 per cent of GDP. The proportion of GDP of copyright-based industries can be compared to the economic contribution of industries such as education (4.50 per cent). The economic contribution (GDP) of core copyright industries in 2004 was greater than the one arising from the following industries: Mining and extraction (0.79 per cent); fisheries (0.22 per cent); and household activities (0.18 per cent).

4.3. Economic contribution of core copyright industries

In 2002 and 2004, the contribution of gross output of core copyright industries to total gross output in Croatia accounted for 3.3 per cent, while, in relation to 2002, it increased somewhat. The proportion of GDP of the industry mentioned was less in terms of total GDP in 2004 in comparison with 2002, and amounted to approximately three per cent of the GDP of Croatia. The number of those employed in core copyright industries in relation to the total number of employed in Croatia in 2002 amounted to 2.8 per cent, while in 2004 it increased to 3.2 per cent. If we compare the proportion of the number of employed in core copyright industries in 2004 with the proportion of GDP, we can conclude that there has been a reduction in work productivity.

4.3.1. Aggregated indicators of the economic contribution of core copyright industries in 2002 and 2004

Graph 10. Economic contribution of core copyright industries in Croatia in 2002 and 2004



The economic contribution of core copyright industries measured in terms of GDP is, in most cases, greater than the contribution measured in terms of the number of those employed in core copyright industries, in comparison with the total number of employed in developed industrial countries.

However, the reverse situation is also possible, as in Croatia in 2004. This can be explained by increased mobilization of the workforce in industries that are integral parts of core copyright industries, the reason being the non-existence of an adequate level of technological development. The introduction of new technological solutions would reduce the need for new employment, that is would increase work productivity, which in turn would decrease the contribution of core copyright industries, measured in terms of the number of employed in relation to the contribution measured by GDP.

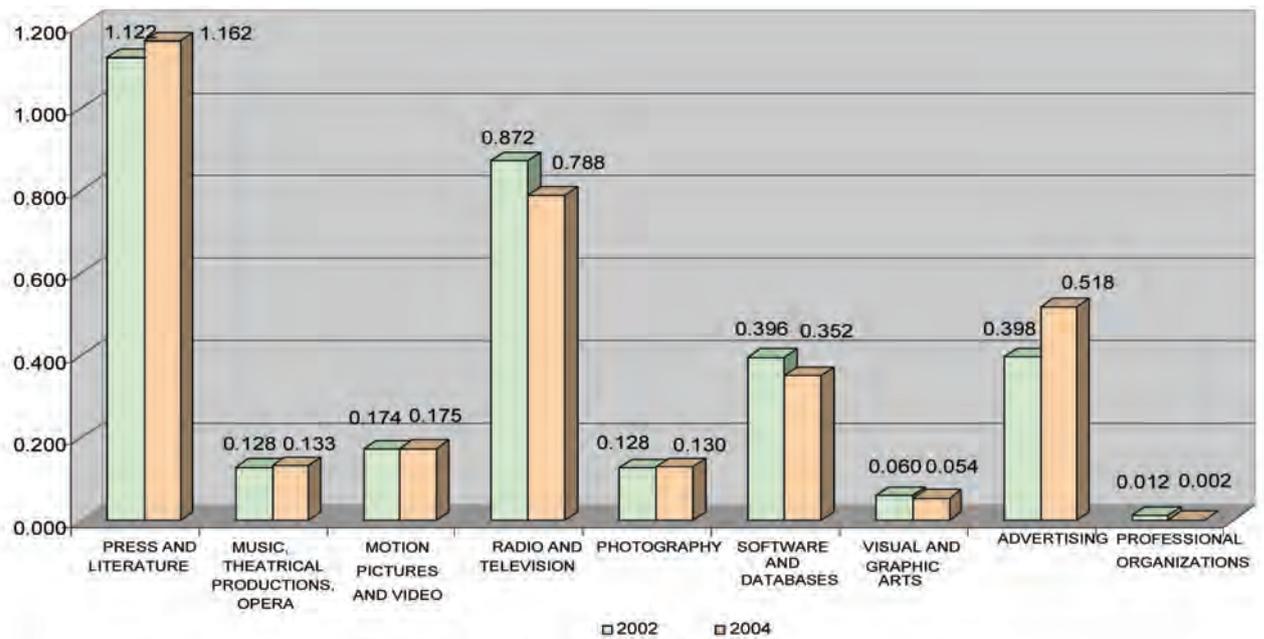
A similar situation occurred in some other countries that conducted the same type of studies. According to the data from the "Report on the economic contribution of copyright-based industries in the EU-15,"⁴⁸ although the figures are for the year 2000, Denmark, Finland, Greece, Latvia and Hungary witnessed a greater contribution by core copyright industries to the number of employed than to value added.

⁴⁸Robert G. Picard, Timo E. Toivonen, Mikko Gronlund: *The Contribution of Copyright and Related Rights to the European Economy*, Final Report, 2003..

4.3.2. Economic contribution by activities of core copyright industries in 2002 and 2004

4.3.2.1 Gross output

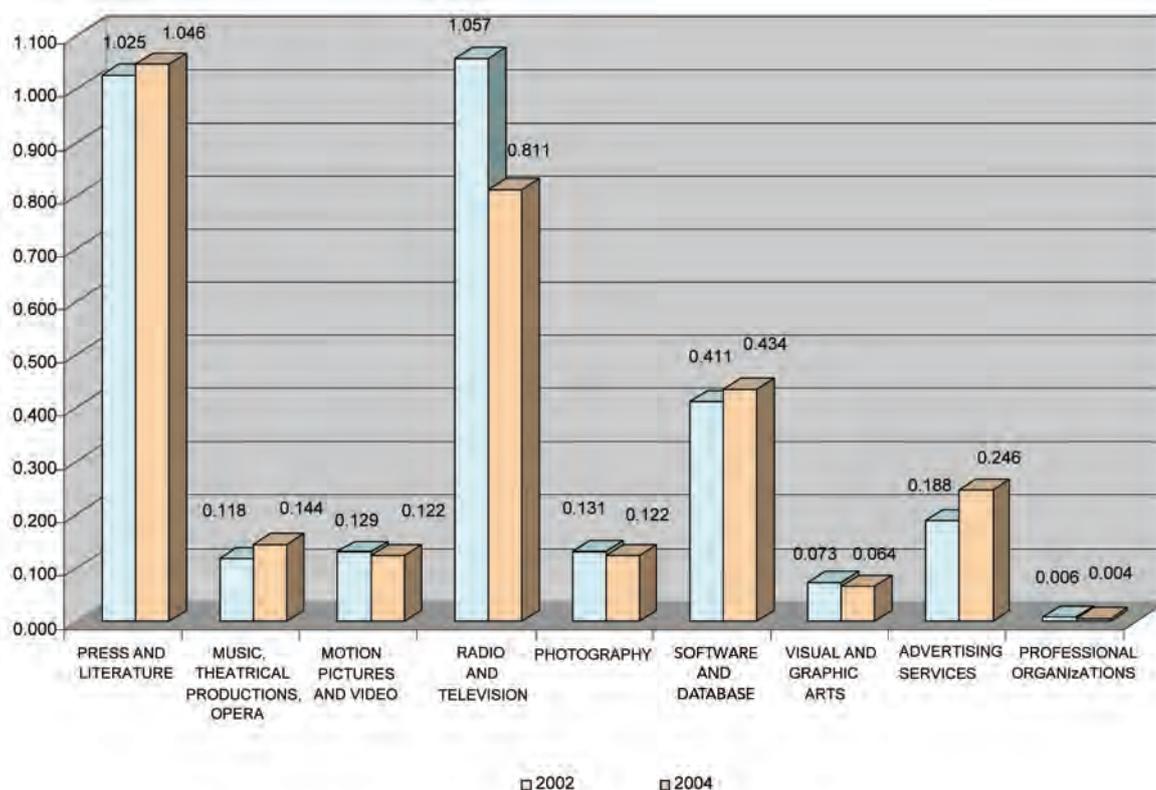
Graph 11. Economic contribution of activities of core copyright industries in Croatia in 2002 and 2004 as a percentage of national gross output



In 2002 and 2004, the greatest contribution to the production of gross output was made by the activities of the press and literature, radio and television, advertising services, and software and databases.

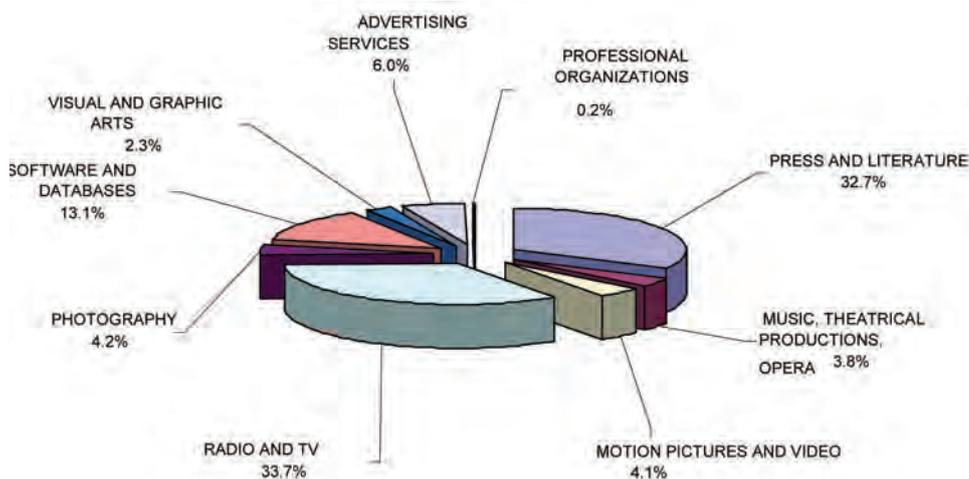
4.3.2.2 Gross domestic product

Graph 12. Economic contribution of activities of core copyright industries in Croatia in 2002 and 2004 as a percentage of GDP

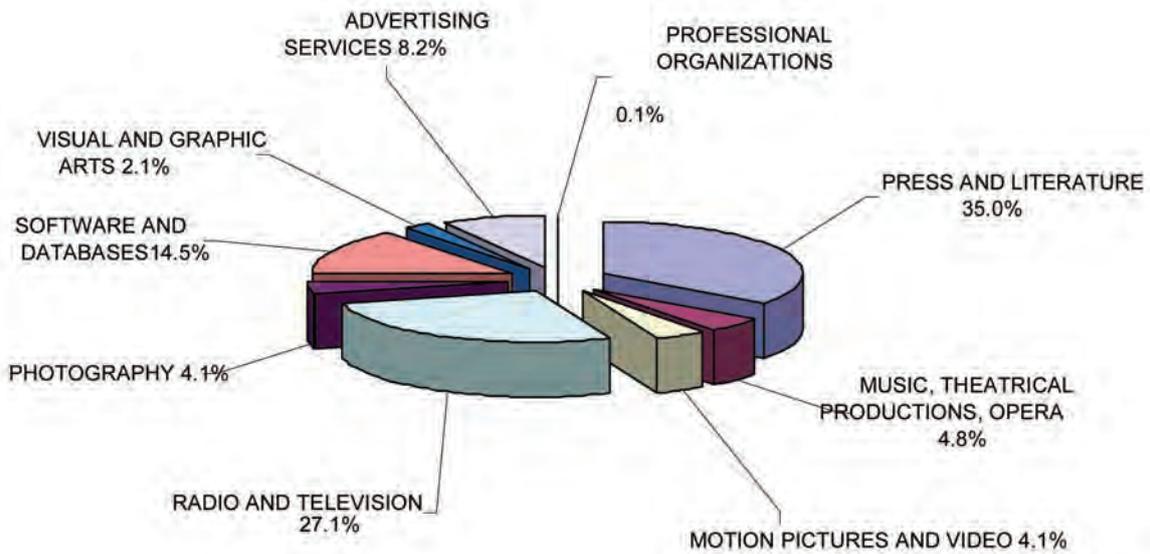


The following activities of the core copyright industries made the greatest contribution to the creation of value added in 2002 and 2004: press and literature, radio and television, software and databases, and advertising services. In 2002 these activities generated around 86 per cent, and in 2004 around 85 per cent of the gross domestic product of core copyright industries. Nevertheless, we should single out the activities of the press and literature, radio and television, since they themselves generated about two thirds of the GDP of core copyright industries.

Graph 13. GDP structure of core copyright industries in Croatia in 2002

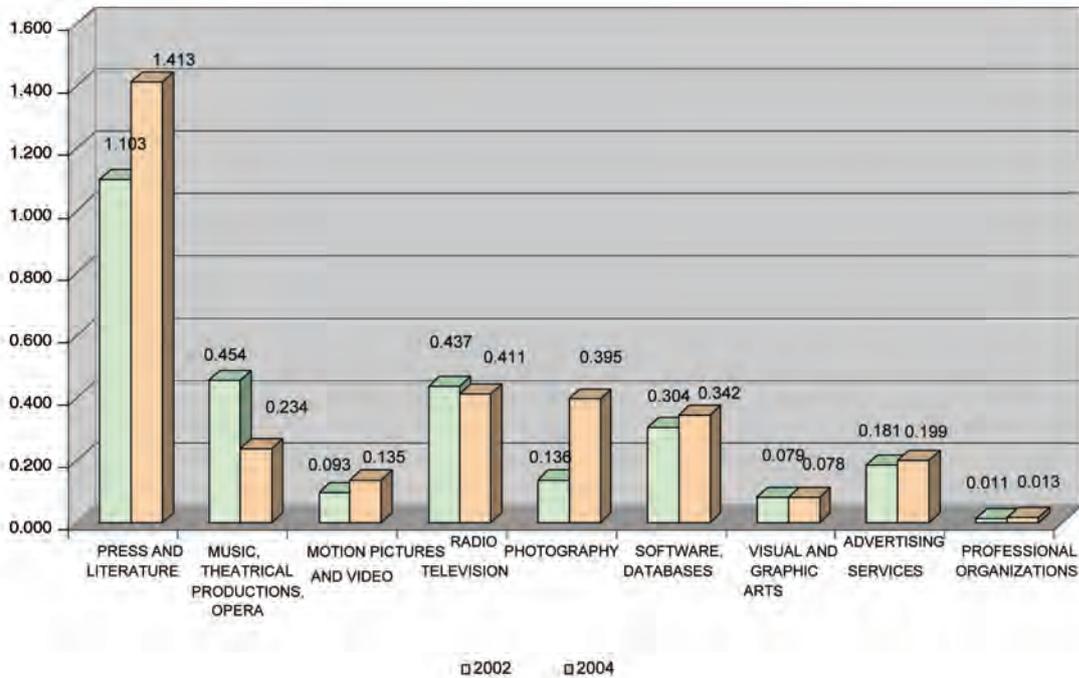


Graph 14. GDP structure of core copyright industries in Croatia in 2004



4.3.2.3 Number of employed

Graph 15 Economic contribution of activities of core copyright industries in Croatia in 2002 and 2004 as a percentage of number of employed



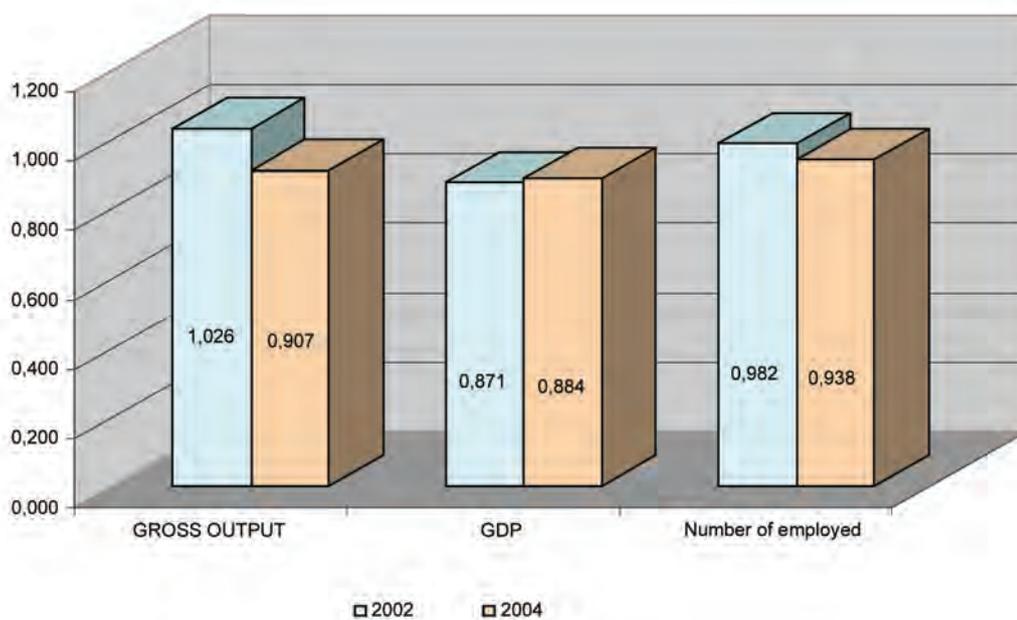
4.4. Economic contribution of interdependent copyright industries

4.4.1. Aggregated indicators of the economic contribution of interdependent copyright industries in 2002 and 2004

The gross output of interdependent copyright industries in 2002 was 3.4 billion kuna, which is just over one per cent of the gross output of the Croatia, while in 2004 it amounted to 3.7 billion kuna, less than one per cent of the gross output of Croatia.

The proportion of gross domestic product of interdependent copyright industries in terms of GDP in 2002 and 2004 was approximately 0.9 per cent, while the number of employed in interdependent copyright industries constituted approximately the same amount as a percentage of the total number of employed in Croatia in 2002 and 2004.

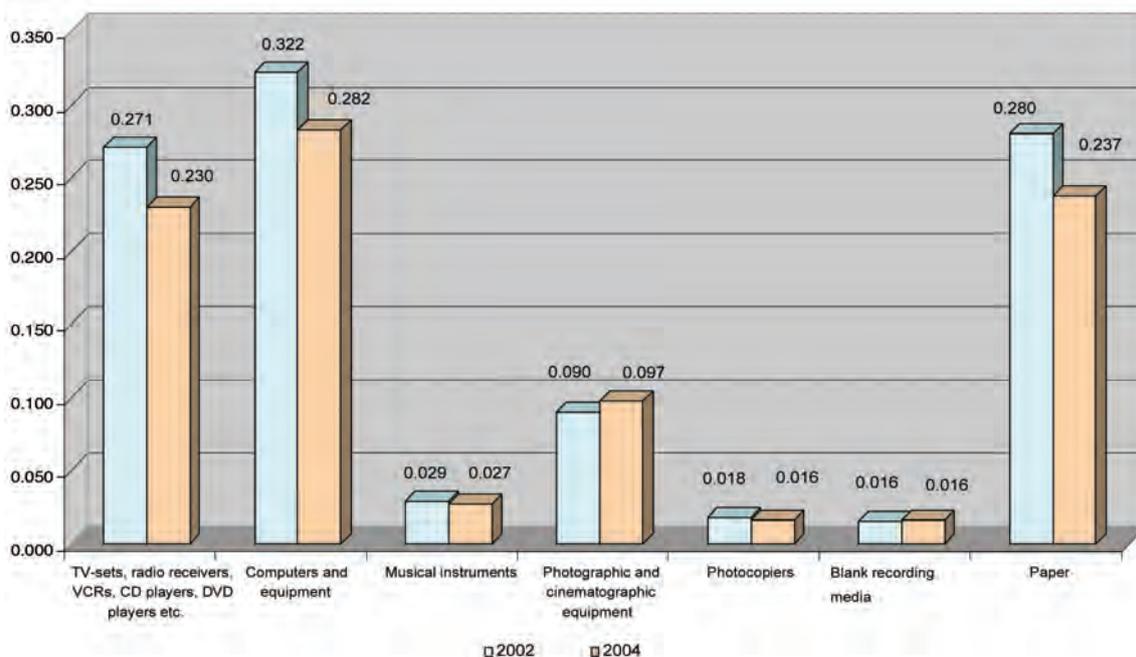
Graph 16. Economic contribution of interdependent copyright industries in Croatia in 2002 and 2004



4.4.2. Economic contribution of interdependent copyright industries in 2002 and 2004

4.4.2.1 Gross output

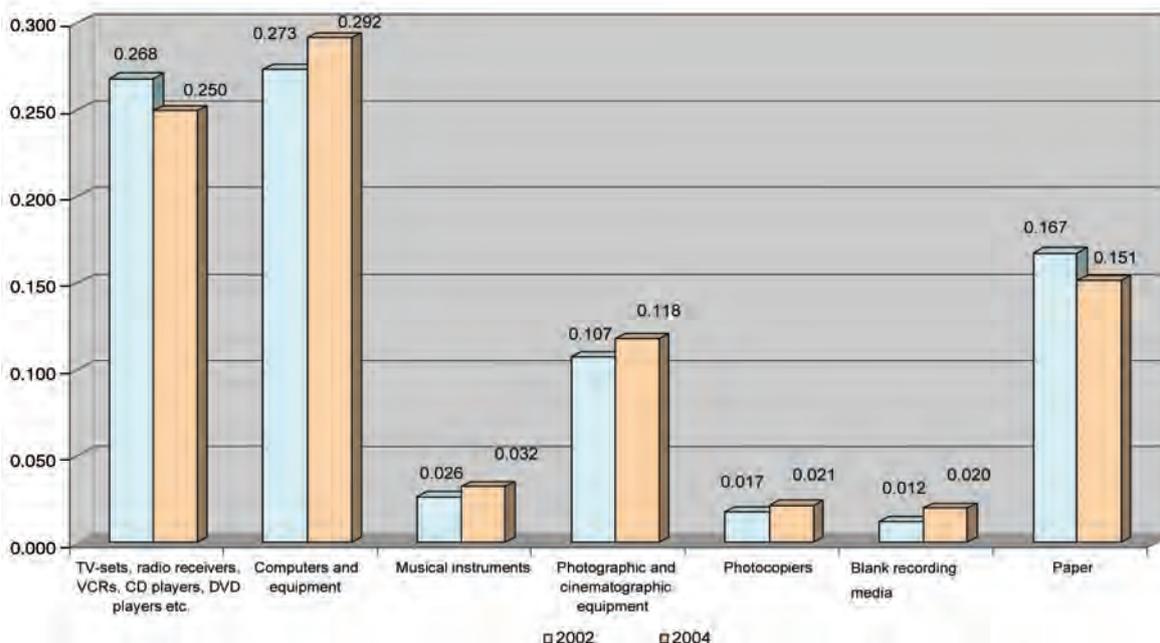
Graph 17. Economic contribution of activities of interdependent copyright industries in Croatia in 2002 and 2004 as a percentage of national gross output



In 2002 and 2004, the greatest contribution to the gross output of interdependent copyright industries was made by the activities involving personal computers and equipment, paper and television sets, radio receivers, video recorders, CD players, DVD players, etc.

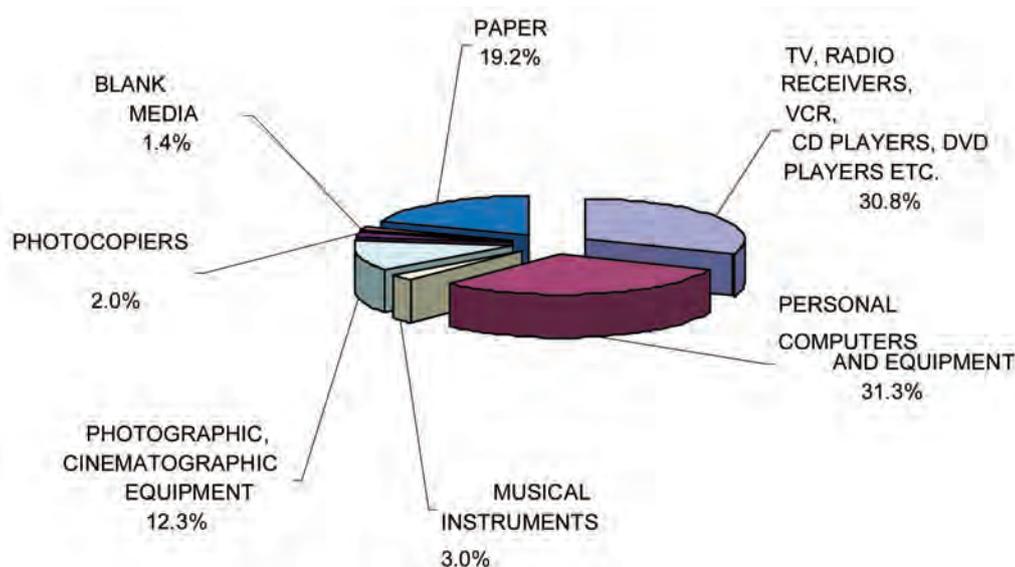
4.4.2.2 Gross domestic product

Graph 18. Economic contribution of activities of interdependent copyright industries in Croatia in 2002 and 2004 as a percentage of GDP

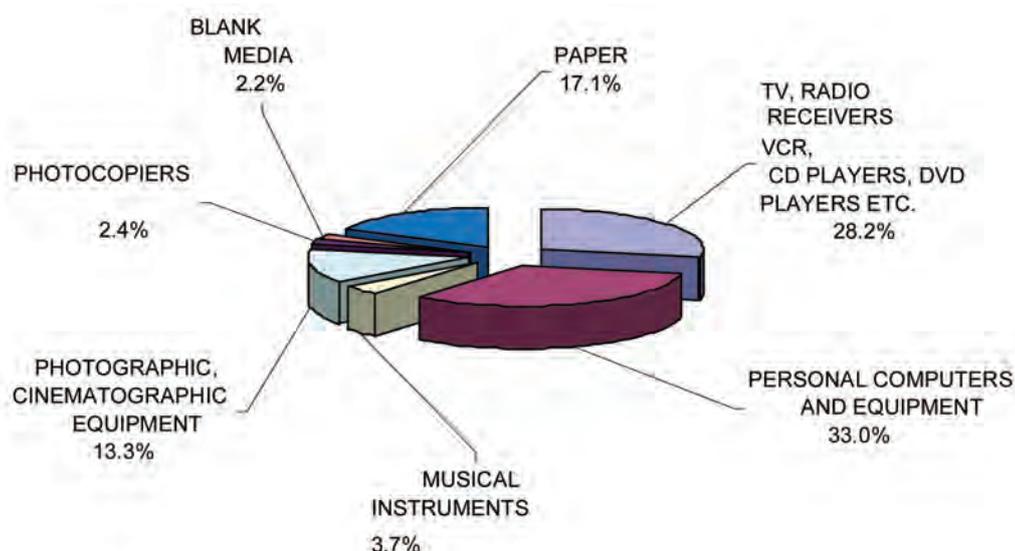


The greatest contribution to the generation of GDP by interdependent copyright industries in 2002 and 2004 was made by the following activities: personal computers and equipment (31.3 per cent), television sets, radio receivers, video recorders, CD players, DVD players, etc. (30.8 per cent, or 28.2 per cent), paper (19.2 per cent, or 17.1 per cent), and photographic and cinematographic equipment (12.3 per cent, or 13.3 per cent). The activities represented show a stable contribution for the years monitored.

Graph 19. GDP structure of interdependent copyright industries in Croatia in 2002



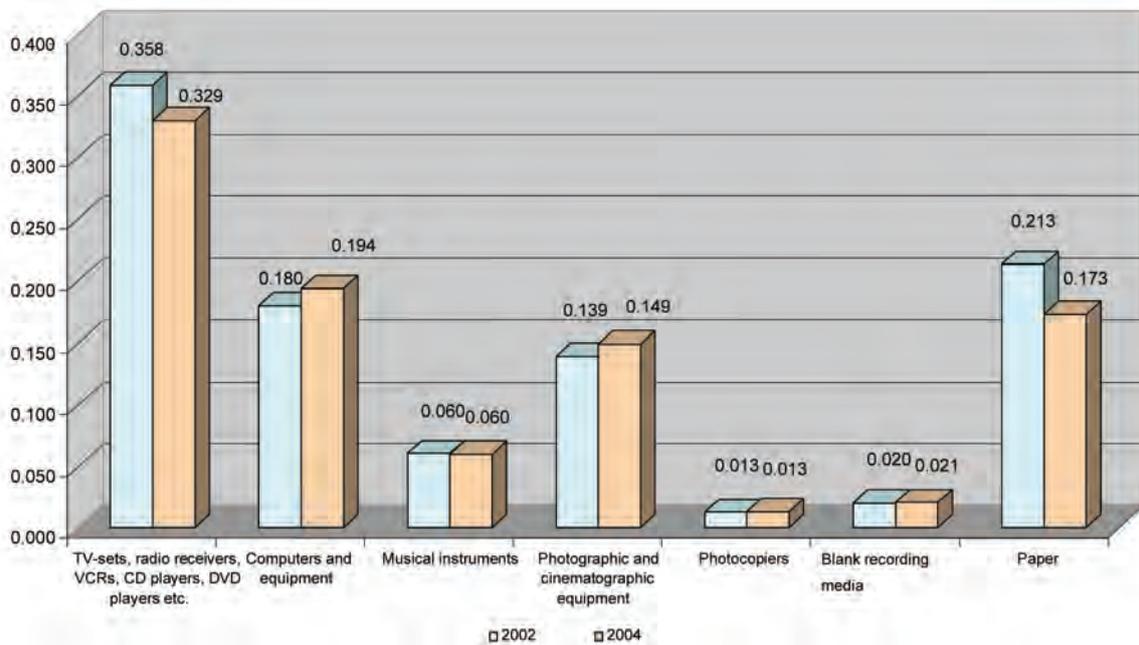
Graph 20. GDP structure of interdependent copyright industries in Croatia in 2004



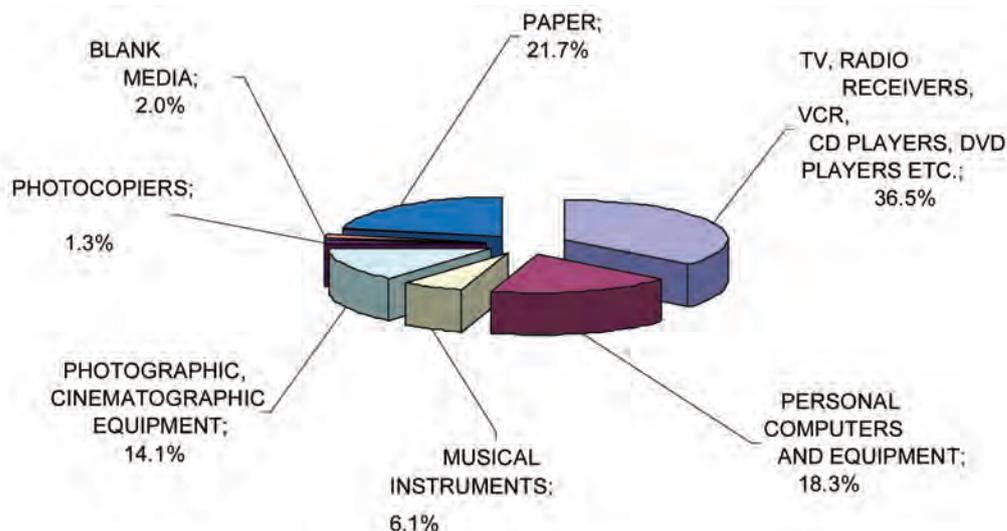
4.4.2.3 Number of employed

The greatest contribution made by those employed in interdependent copyright industries in 2002 is shown in the following activities: television sets, radio receivers, video recorders, CD players, DVD players, etc. (36.5 per cent), paper (21.7 per cent), i.e., personal computers and equipment (18.3 per cent), and photographic and cinematographic equipment (14.1 per cent). In 2004, the contribution of the activities involving television sets, radio receivers, CD players, DVD players, etc. decreased a little (35.1 per cent), as well as the activities involving paper (18.4 per cent), while it increased in activities involving personal computers and equipment (20.7 per cent) and activities involving photographic and cinematographic equipment (15.9 per cent).

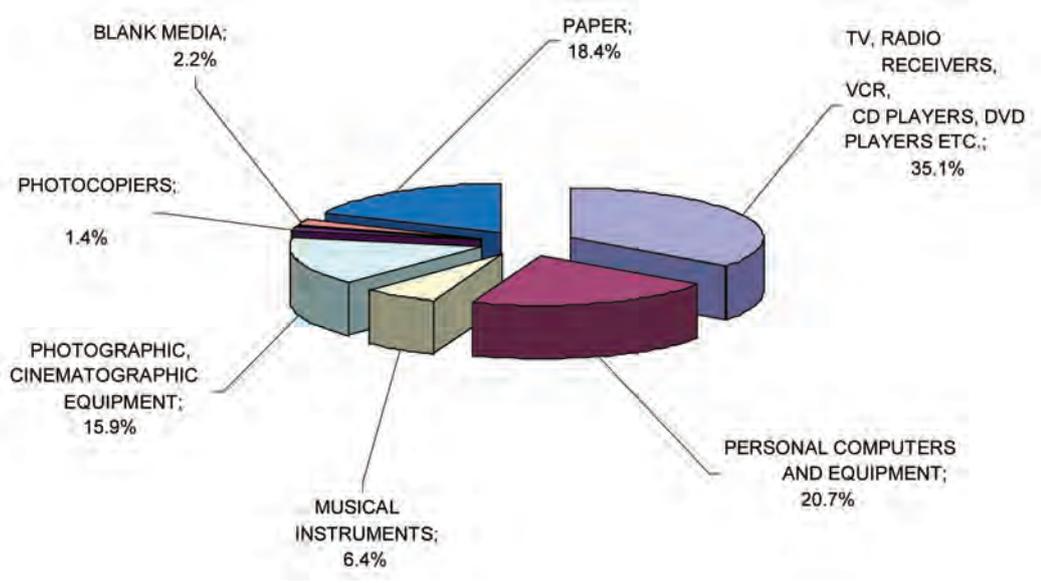
Graph 21. Economic contribution of activities of interdependent copyright industries in Croatia in 2002 and 2004 as a percentage of number of employed



Graph 22. Structure of number of employed in interdependent copyright industries in 2002



Graph 23. Structure of number of employed in interdependent copyright industries in 2004



4.5. Economic contribution of partial copyright industries

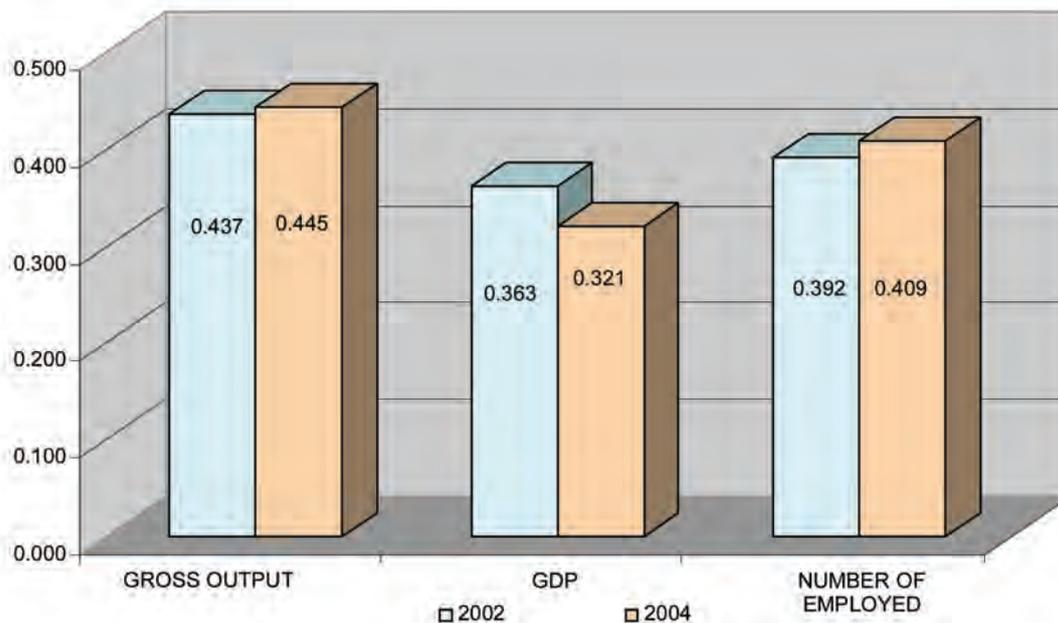
Partial copyright industries include, as the name itself indicates, industries that are only partially engaged in the production of copyrighted works, i.e., only a specific segment of their activities is aimed at creating those works or products. The proportion of copyright-protected works is expressed by the copyright factor.⁴⁹

4.5.1. Aggregated indicators of the economic contribution of partial copyright industries in 2002 and 2004

It can be concluded from the next graph that the economic contribution of partial copyright industries measured by gross output, GDP and the number of employed is relatively small. In 2002, these industries generated 1.43 billion kuna of gross output, i.e., 0.44 per cent of national gross output, whereas in 2004 this figure was 1.80 billion kuna, i.e., an identical relative contribution of 0.44 per cent of national gross output. The economic contribution measured in terms of the contribution to GDP and the number of employed was somewhat smaller.

⁴⁹For the meaning and value of the copyright factor, see chapter 3.6.

Graph 24. Economic contribution of partial copyright industries in Croatia in 2002 and 2004 as a percentage of the chosen indicators

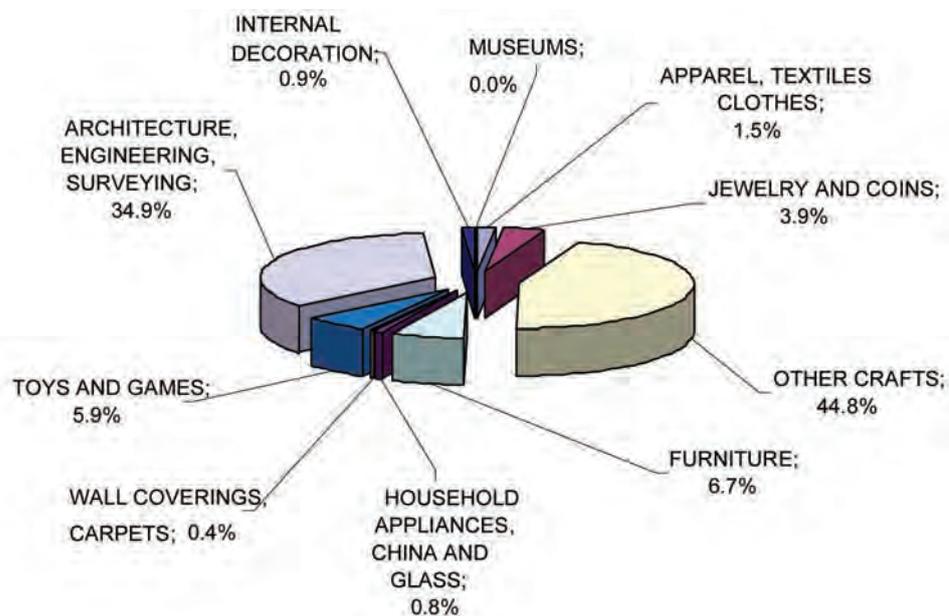


4.5.2. Economic contribution of activities of partial copyright industries in 2002 and 2004

4.5.2.1 Gross output

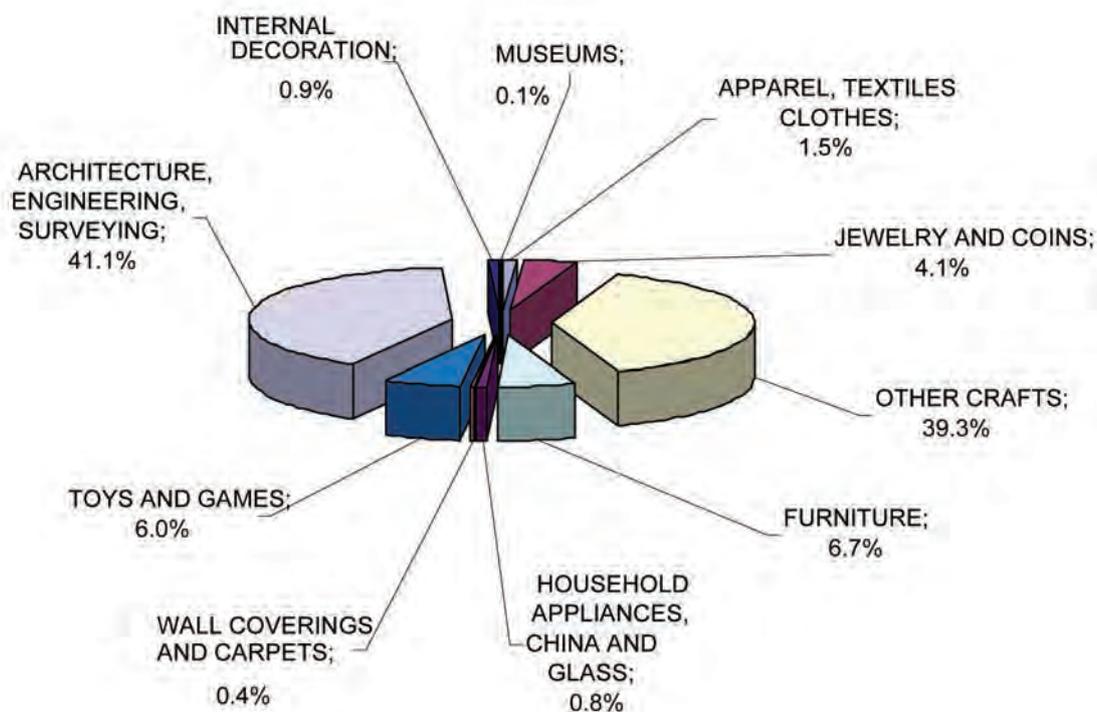
In 2002, the greatest contribution to the gross output of partial copyright industries was made by the following activities: other crafts 44.8 per cent, architecture, engineering and surveying 34.9 per cent, and toys and games 5.9 per cent. In 2004, the first two activities changed roles, in other words, the contribution of other crafts decreased to 39.3 per cent, while the contribution of architecture, engineering and surveying increased to 41.4 per cent. The contribution of the production of toys and games remained practically the same as it was in 2002.

Graph 25. Gross output structure of partial copyright industries in 2002





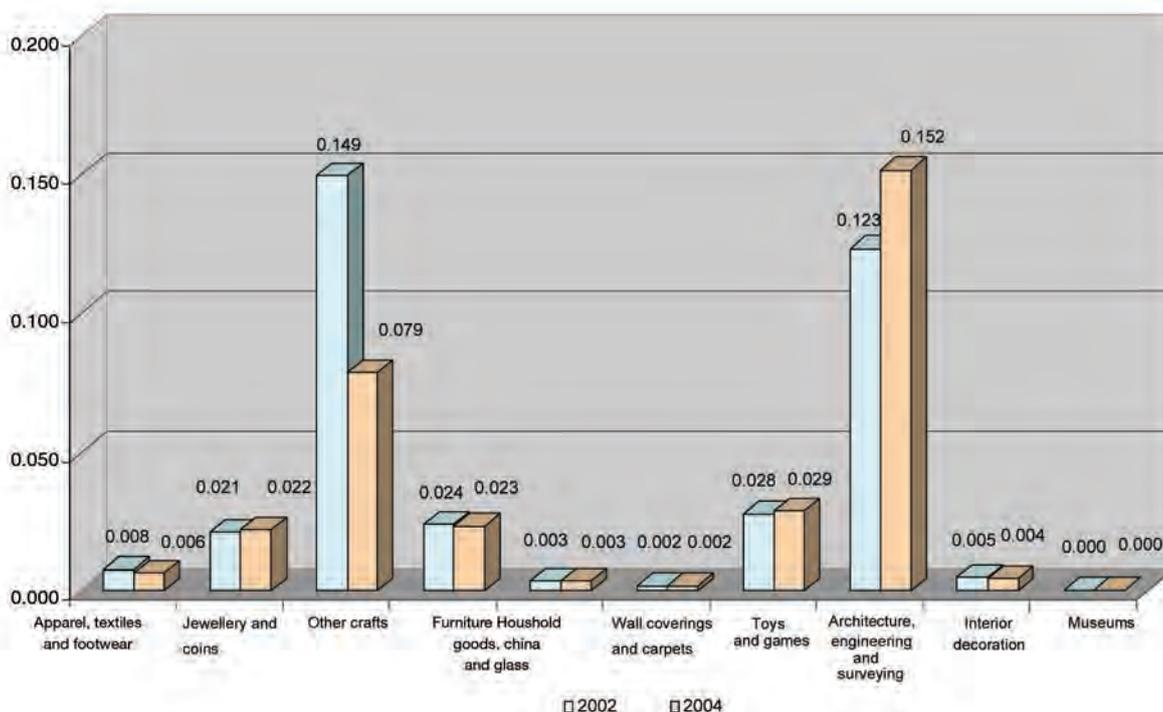
Graph 26. Gross output structure of partial copyright industries in 2004



4.5.2.2 Gross domestic product

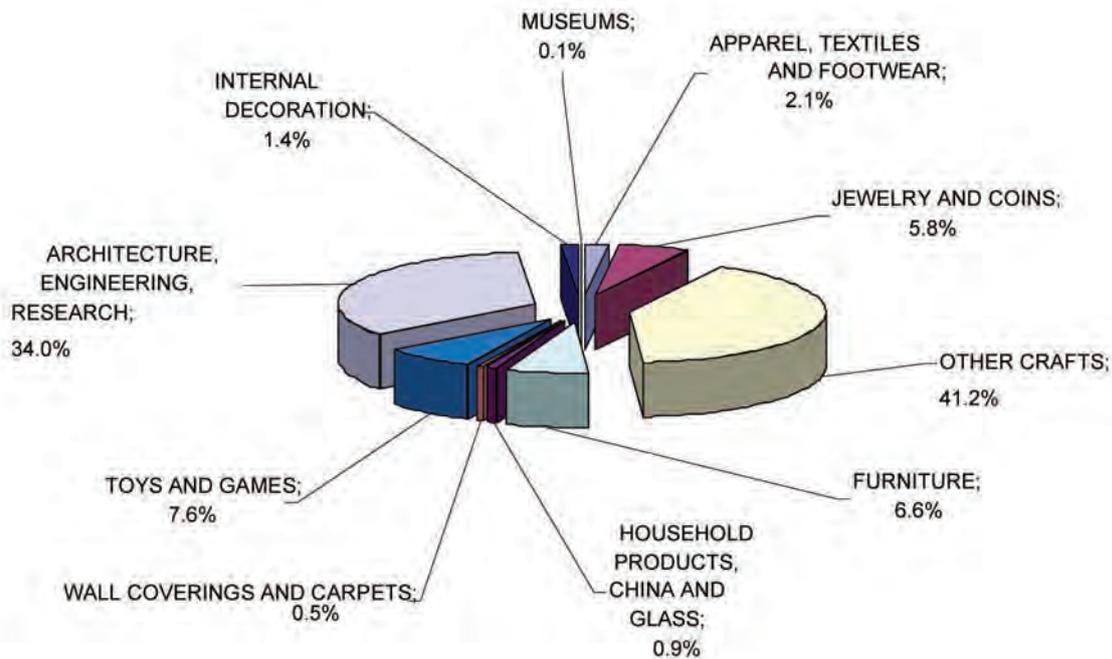
The greatest contribution to the generation of GDP in the partial copyright industries in 2002 and 2004 was made by the following activities: other crafts, architecture, engineering and surveying, and toys and games.

Graph 27. Economic contribution of particular activities of partial copyright industries in Croatia in 2002 and 2004 (including retail and wholesale) in percentage terms.

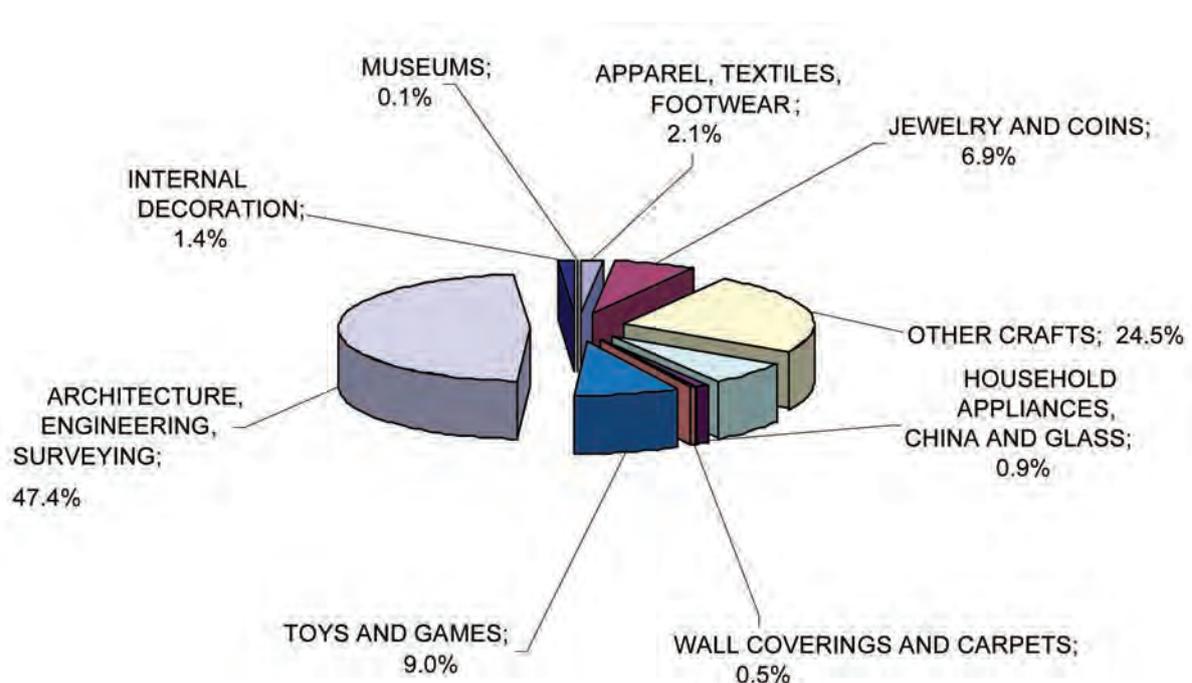


The above-mentioned industries have, at the same time and one by one, generated the greatest contribution to GDP in the partial copyright industries in 2002; other crafts 41.2 per cent, architecture, engineering and surveying 34.0 per cent and toys and games 7.6 per cent. In 2004, these contributions changed; other crafts 24.5 per cent, architecture, engineering and surveying 47.4 per cent, and toys and games nine per cent.

Graph 28. GDP structure of partial copyright industries in Croatia in 2002



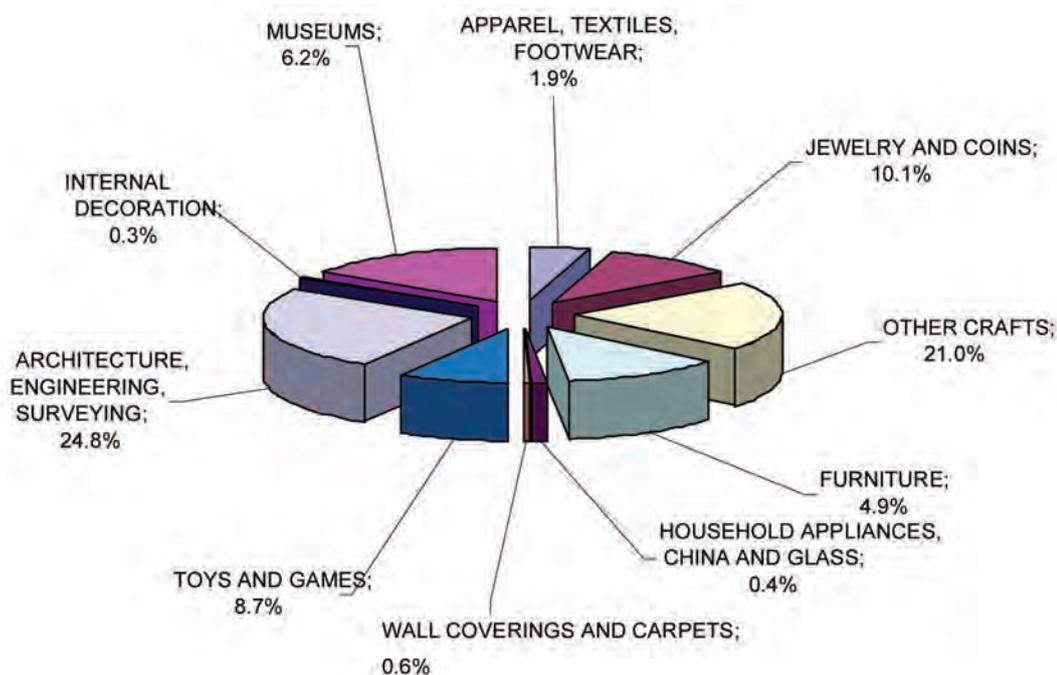
Graph 29. GDP structure of partial copyright industries in Croatia in 2004



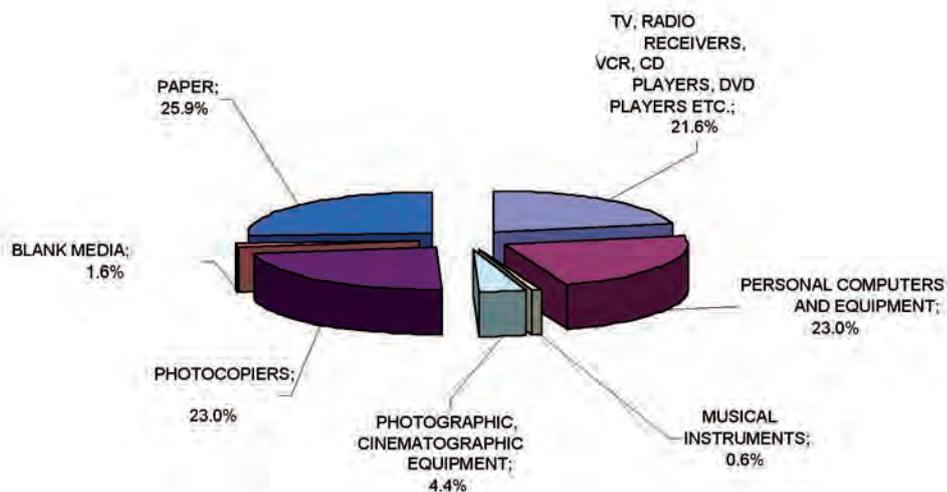
4.5.2.3 Number of employed

In 2002, the greatest contribution to the production of employment in partial copyright industries was made by the following: architecture, engineering and surveying 24.8 per cent, other crafts 21.0 per cent, and toys and games 8.7 per cent. In 2004, the contribution of architecture, engineering and surveying increased to 25.2 per cent, while the contribution of other crafts decreased to 16.4 per cent and the contribution of the activities involving toys and games increased to 10 per cent.

Graph 30. GDP structure of partial copyright industries in Croatia in 2002



Graph 31. Structure of number of employed in partial copyright industries in 2004



4.6. Economic contribution of non-dedicated copyright industries

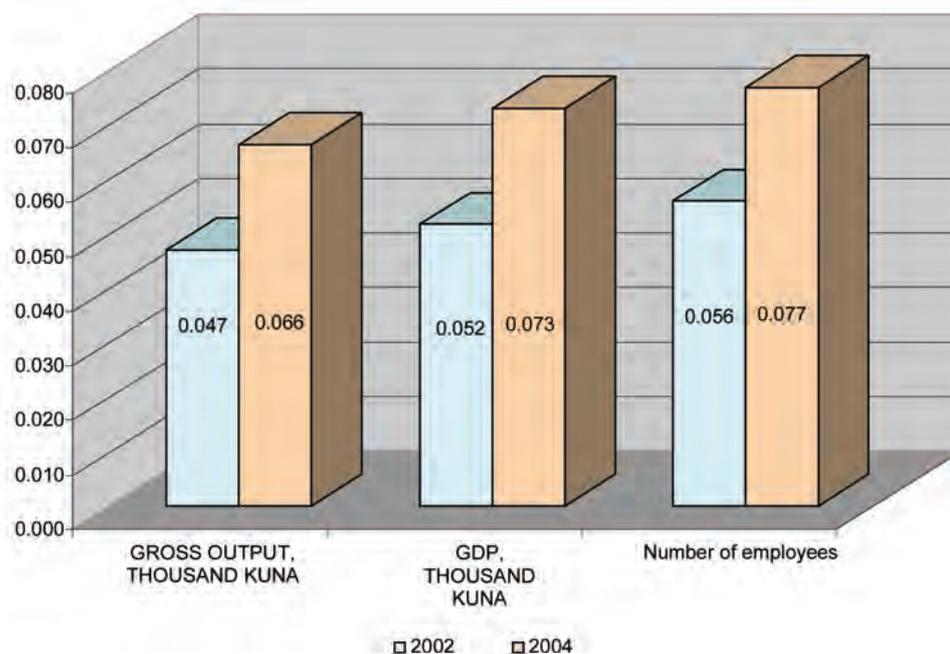
The non-dedicated copyright industries make a contribution to the broadcasting, communication, distribution and sale of copyrighted works and products. In the calculations of the economic contribution made by this industry to the economy of Croatia as a whole, this Study relied on the assumption that the contribution of copyright-related activities involving general wholesale and retail sale is identical to the contribution of copyright-based industries to GDP in relation to the total GDP of Croatia.

4.6.1. Aggregated indicators of the economic contribution of non-dedicated industries in 2002 and 2004

The economic contribution of non-dedicated copyright industries, viewed in terms of gross output, gross domestic product and the number of employed, amounted to around 0.05 per cent in 2002 and almost 0.1 per cent in 2004. In 2002, the contribution of this industry to the production of the gross output of the national economy amounted to 154,159,000 kuna, i.e., 0.05 per cent of the gross output of the Croatia.

In 2004, the contribution was slightly greater (0.06 per cent). The contribution to the production of gross domestic product in 2002 was 93,748,000 kuna (0.052 per cent) and in 2004, 156,901,000 kuna (0.073 per cent) of the GDP of Croatia. An almost identical contribution for this industry was recorded for the number of employed. In 2002, this amounted to 0.056 per cent of the total number of employed, while in 2004 it was 0.077 per cent.

Graph 32. Economic contribution of non-dedicated copyright industries in Croatia in 2002 and 2004, as a percentage of the chosen indicators

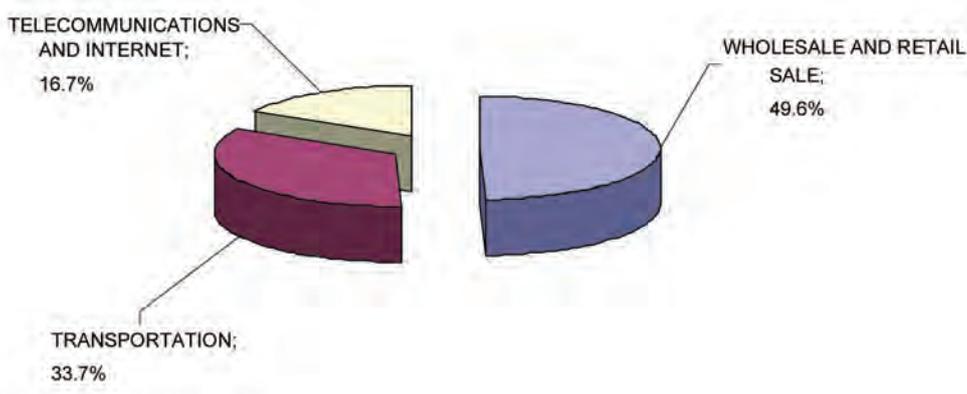


4.6.2. Economic contribution of non-dedicated copyright industries by activities

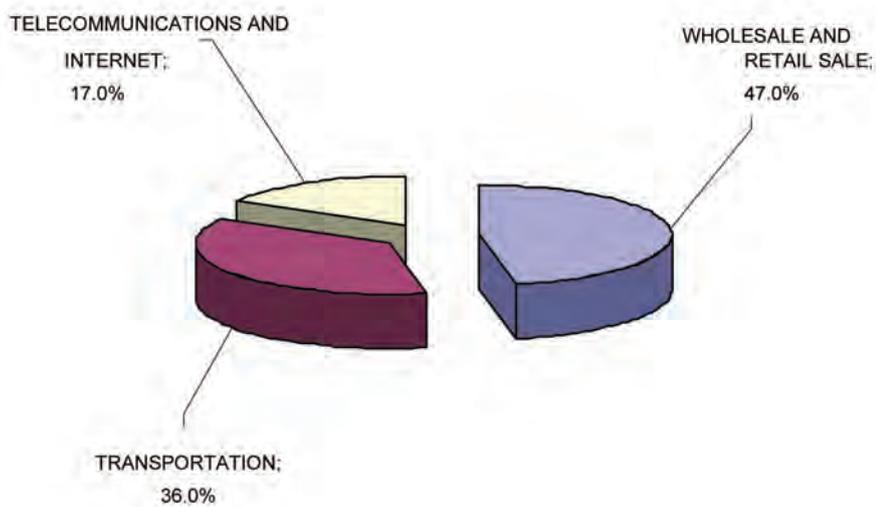
4.6.2.1 Gross output

In 2002, wholesale and retail sale generated around 50 per cent of the gross output of non-dedicated industries, while all the other activities together (telecommunications, Internet and transportation) generated the other 50 per cent.

Graph 33. Structure of gross output of non-dedicated copyright industries in 2002



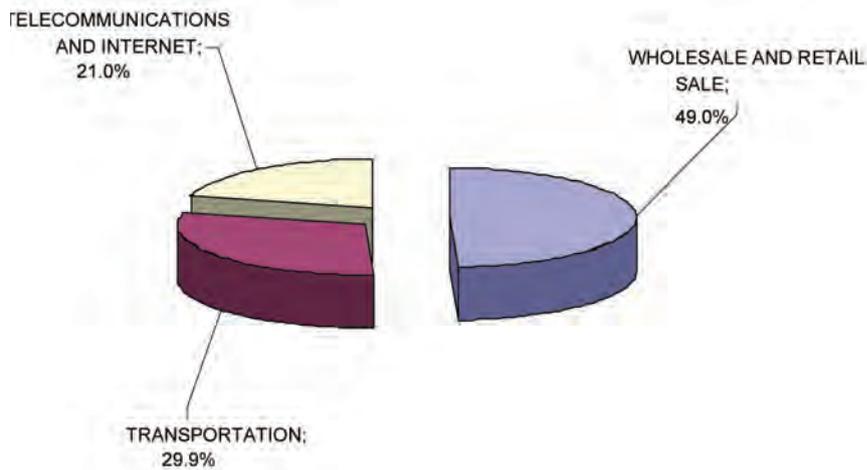
Graph 34. Structure of gross output of non-dedicated copyright industries in 2004



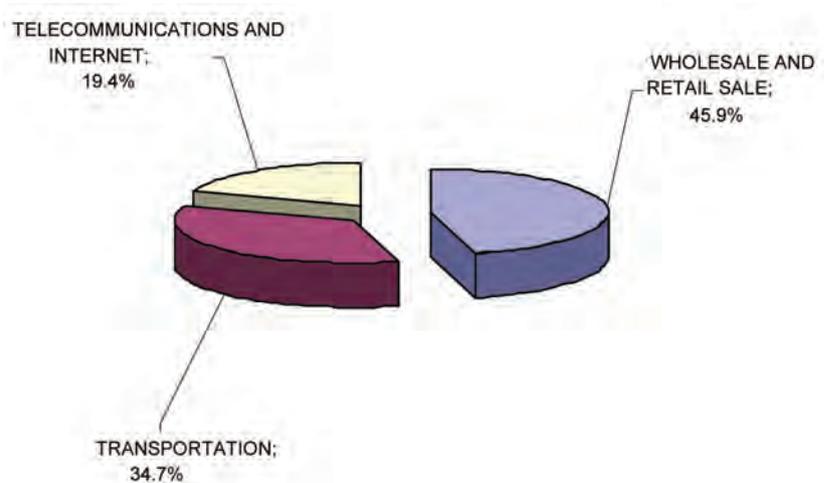
4.6.2.2 Gross domestic product

Similar to the case of gross output, in 2002 wholesale and retail sale generated around 50 per cent of the gross output of non-dedicated industries, while the other activities together (telecommunications, Internet and transportation) generated the other 50 per cent.

Graph 35. Structure of GDP of non-dedicated copyright industries in 2002



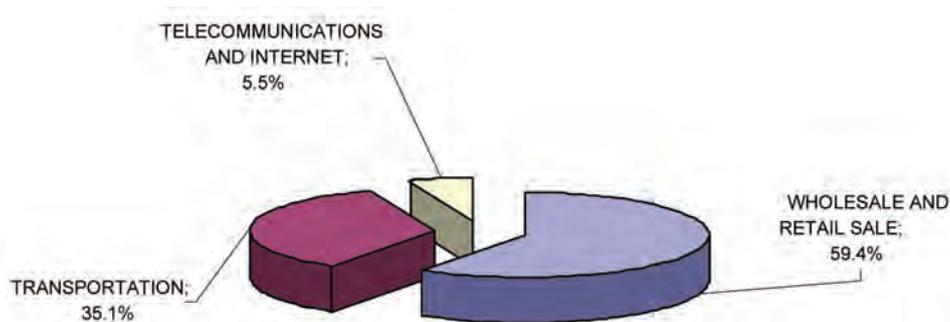
Graph 36. Structure of GDP of non-dedicated copyright industries in 2004



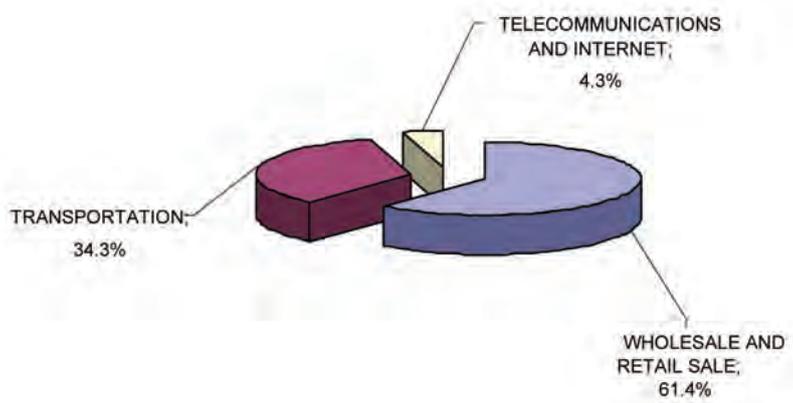
4.6.2.3 Number of employed

Measured in terms of the number of employed in 2002, wholesale and retail sale generated around 60 per cent of the total number of employed in non-dedicated industries, whereas telecommunications and the Internet generated only 5.5 per cent, and transportation 35.1 per cent of those employed.

Graph 37. Structure of employed in non-dedicated copyright industries in Croatia in 2002



Graph 38. Structure of employed in non-dedicated copyright industries in Croatia in 2004



4.7. Foreign trade of CBIs

The calculation of foreign trade, that is, the import and export of goods and services of copyright-based industries for 2002 and 2004, was based in this Study on the data from the Statistics on Foreign Trade (import and export of products) and on the Balance of Payments data (import and export of services).

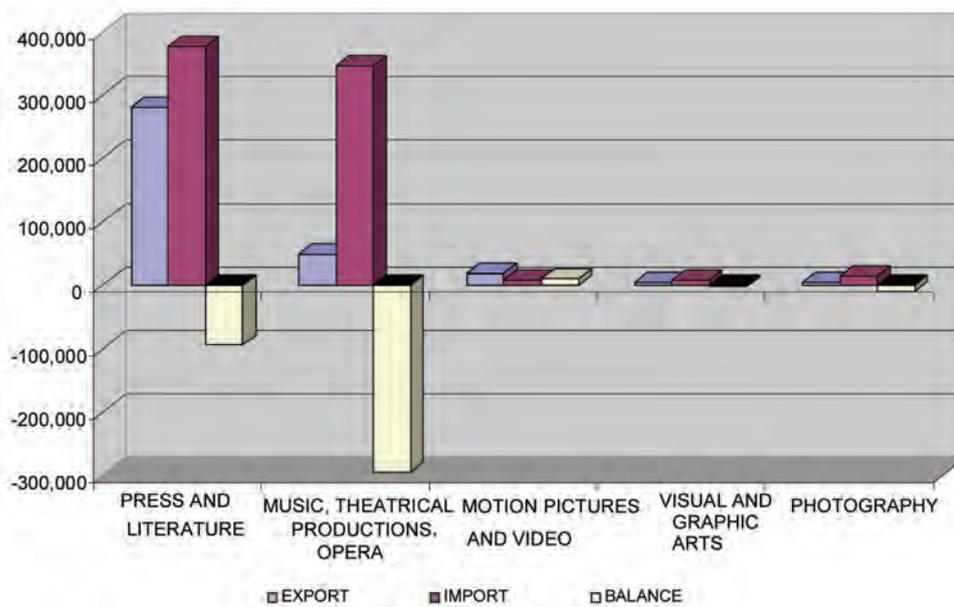
4.7.1. Import and export of products of CBIs

The value of the imported products of the core copyright industries in 2002 amounted to 749 237 thousands kuna, which is around 0.90 per cent of the total value of the import of products, whereas in 2004, it amounted to 771 683 thousands kuna (0.77 per cent of the import of products). The value of exported products of the core copyright industries amounted to 353 659 thousands kuna in 2002, which is around 0.90 per cent of the total value of the exports, whereas in 2004 it was 374 697 thousands of kuna (0.77 per cent of the export of products). It is apparent from these data that the import of products of the core copyright industries in 2002 and 2004 is twice as great as the export of products, which showed a final deficit of 395 578 thousands of kuna in 2002 and 396 987 thousands kuna in 2004.

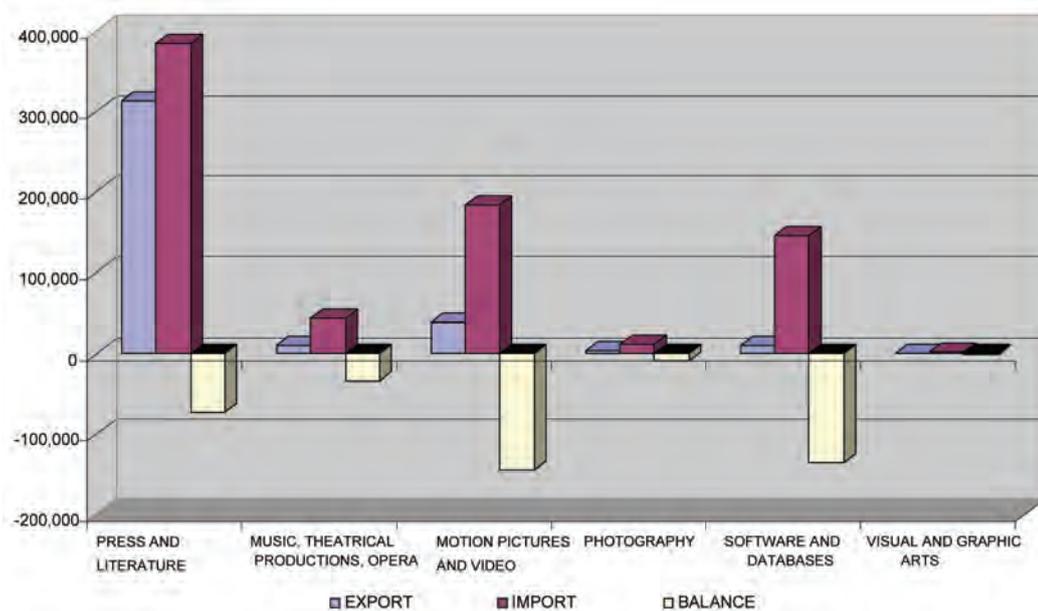
The following graphs (Graphs 39 and 40) clearly indicate that those activities which have the largest numbers of imports of products actually generate the deficit of the foreign trade balance of core copyright industries. This refers to the following activities: press and literature, music, theatrical production and opera, and in 2004, software and databases, and motion pictures and video.

4.7.1.1 Core copyright industries

Graph 39. Foreign trade of core copyright industries in 2002 (thousand kuna)



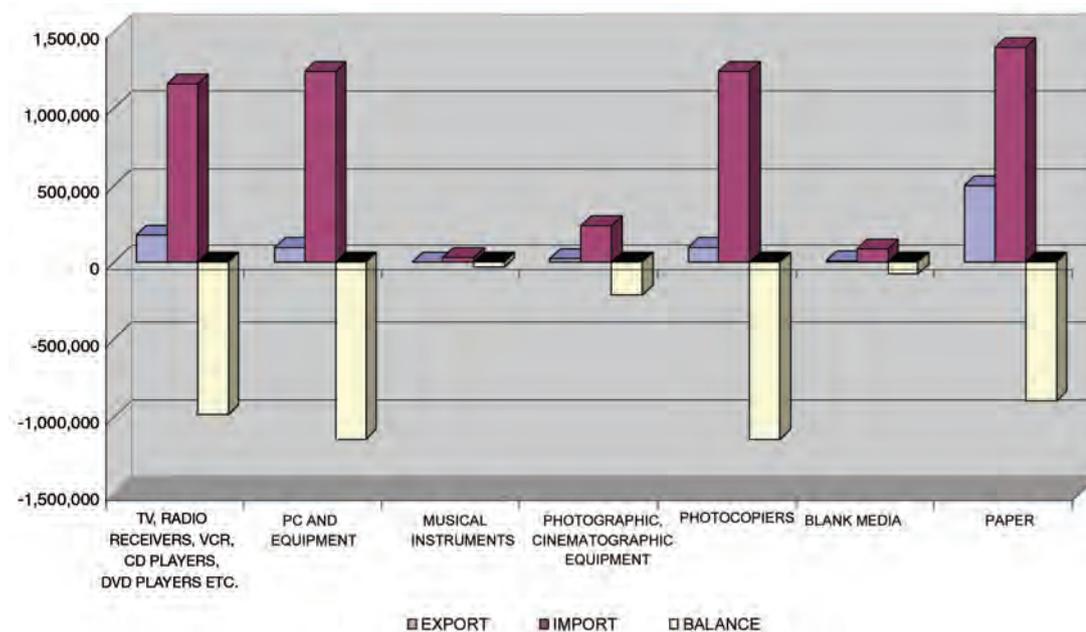
Graph 40. Foreign trade of core copyright industries in 2004 (thousand kuna)



4.7.1.2 Interdependent copyright industries

The value of imports of products of interdependent copyright industries in 2002 amounted to 5.40 billion kuna, which is almost 6.48 per cent of the total value of the imports of products, and in 2004 to 5.86 billion kuna (5.86 per cent of imports of products). The value of the exports of products of interdependent copyright industries in 2002 amounted to around 889 million kuna, which was around 2.27 per cent of the total value of exports of products, whereas in 2004 it amounted to 1,043 billion kuna (2.16 per cent of the exports of products). It is obvious from these data that the imports of products of the core copyright industries in 2002 and 2004 are twice as great as the exports of products, which had a final deficit of 4.50 billion kuna in 2002 and 4.82 billion kuna in 2004.

Graph 41. Foreign trade of interdependent copyright industries in 2002 (thousand kuna)

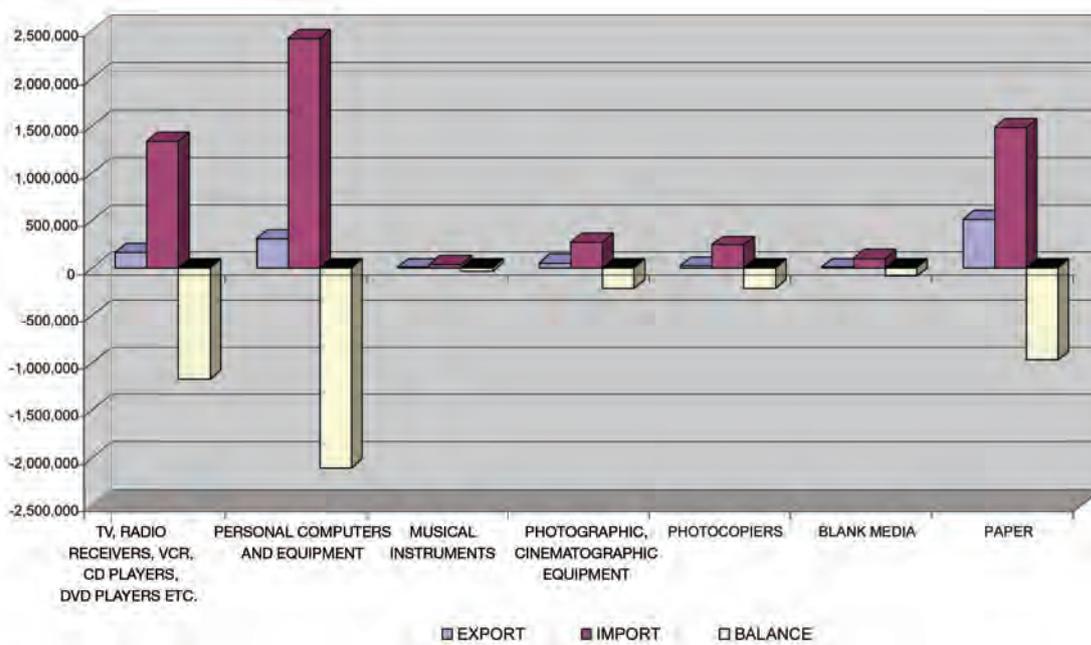


Similar to the core copyright industries, those activities in the interdependent copyright industries which had the largest number of imports of products generated a deficit in the foreign trade balance of interdependent industries.

These activities are the following: production of television and radio receivers, video recorders, CD and DVD players and similar equipment, personal computers and equipment, production of photocopiers and paper. Compared to 2002, the import of photocopiers greatly decreased in 2004, which resulted in a smaller deficit.

Considering the fact that the production of television and radio receivers, video recorders, CD and DVD players and other equipment, personal computers and equipment is not developed enough in Croatia, whereas the demand for those products shows a clear tendency to increase each year, the deficit in the foreign trade balance was inevitable.

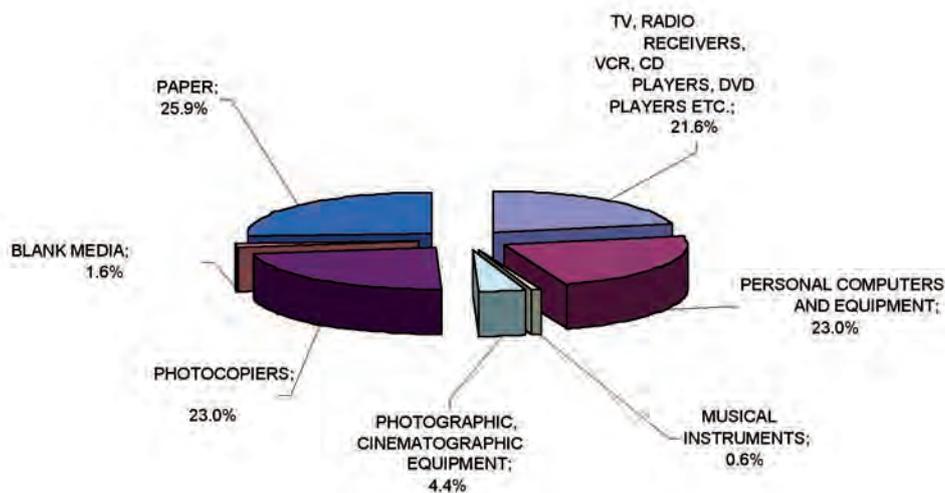
Graph 42. Foreign trade of interdependent copyright industries in 2004 (thousand kuna)



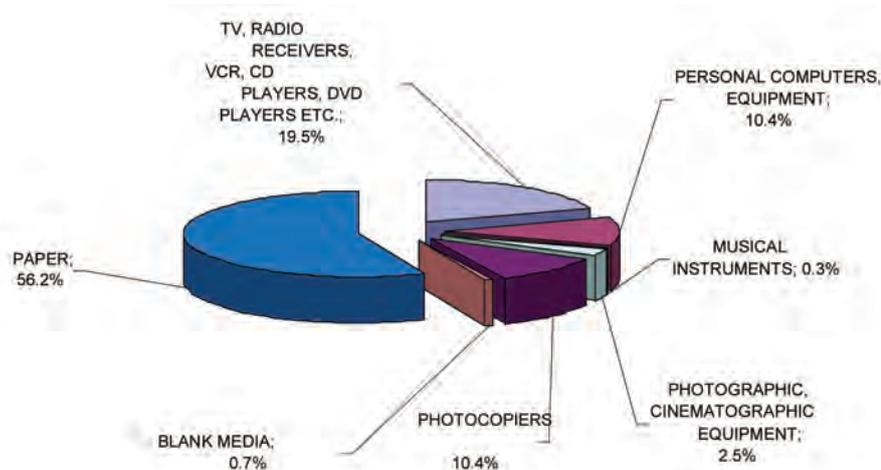
According to the data on the structure of imports of products of interdependent copyright industries, in 2004 70.4 per cent of the total imports of these industries are generated by the activities relating to the production of television and radio receivers, video recorders, CD and DVD players and other equipment, personal computers and equipment, and paper. However, these same activities generate 86.2 per cent of the total imports of interdependent copyright industries. The greatest weight in the structure of imports and exports of interdependent industries is held by the production of paper: 25.9 per cent, that is 56.2 per cent in 2004.



Graph 43. Structure of imports of products of interdependent copyright industries in 2002



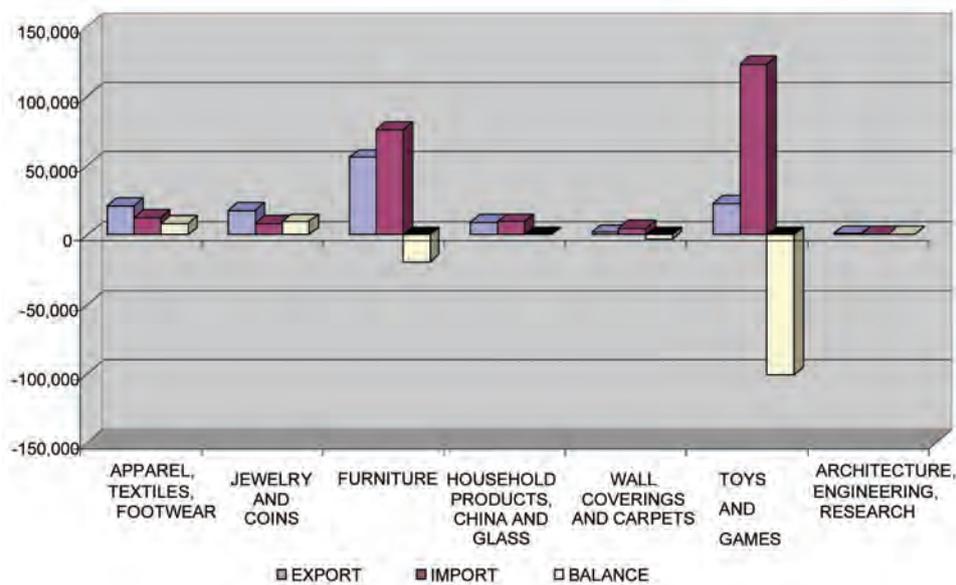
Graph 44. Structure of imports of products of interdependent copyright industries in 2004



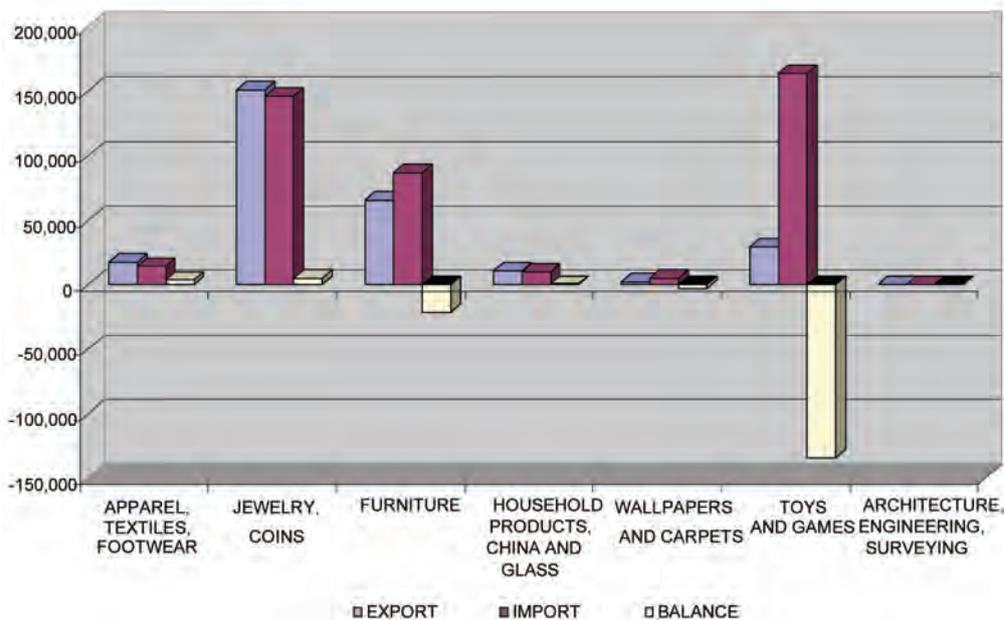
4.7.1.3 Partial copyright-based industries

The value of imports of products of partial copyright industries amounted in 2002 to 127,526,000 kuna, which is 0.325 per cent of the total value of imports of products, and in 2004 – 277,056,000 kuna (0.573 per cent of imports of products). The value of exports of products of partial copyright industries amounted to 233,050,000 kuna in 2002, which was around 0.27 per cent of the total value of imports of products, whereas in 2004 – it amounted to 425,915,000 kuna (0.426 per cent of imports of products). Activities such as the production of textiles, apparel and footwear and the production of jewelry and coins, and in 2002, architecture, engineering and surveying, led to a deficit in the foreign trade balance. By contrast, the greatest deficit was generated by the activities involving the production of toys and games and the production of furniture.

Graph 45. Foreign trade of partial CBIs in 2002 (thousand kuna)



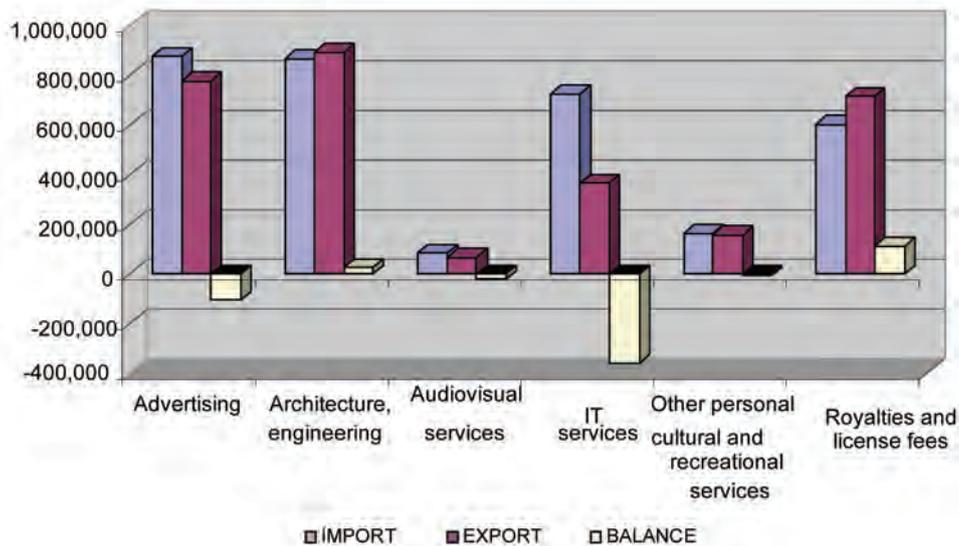
Graph 46. Foreign trade of partial CBIs in 2004 (thousand kuna)



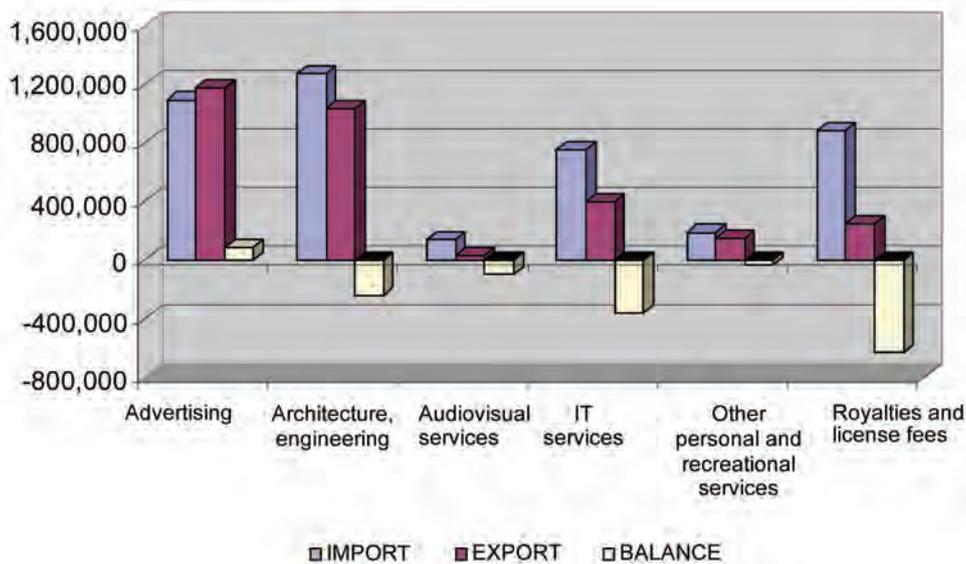


4.7.2. Import and export of services of CBIs

Graph 47. Imports and exports of CBIs in 2002 (thousand kuna)



Graph 48. Imports and exports of CBIs in 2004 (thousand kuna)

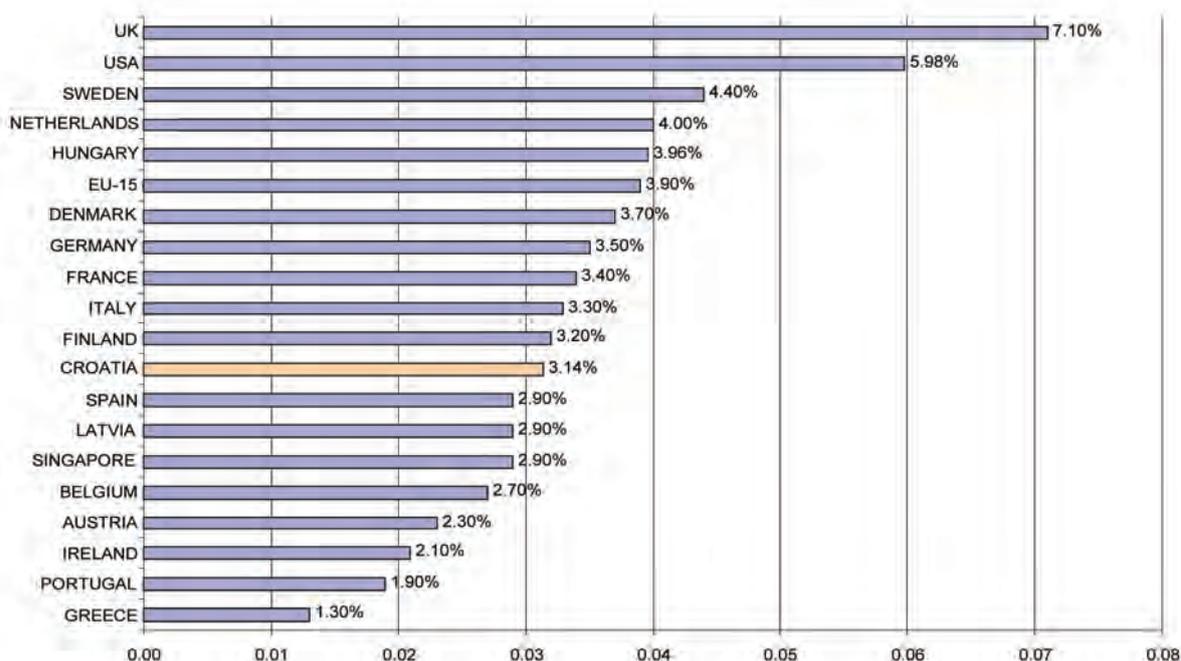


4.8. International comparison of the economic contribution of copyright-based industries

The following graphs (49, 50 and 51) show a comparison of the data on the economic contribution of copyright-based industries, obtained in Croatia, with the data obtained in other countries. The data relate to the economic contribution of core copyright industries to GDP, and employment rates in the core and interdependent copyright industries, measured as a percentage.

The comparison has included the data contained in the Report on the Contribution of Copyright and Related Rights to the Economy of the European Union,⁵⁰ and the published studies from Singapore,⁵¹ Latvia,⁵² Hungary⁵³ and the USA.⁵⁴ It is important to point out that the data contained in the studies mentioned do not cover the same time period,⁵⁵ but the team of authors considered that, irrespective of that fact, an international comparison of the data on the economic contribution of copyright-based activities should be made. This allowed an approximate assessment of the position held by Croatia, with regard to the development and importance of copyright-based activities, to be made at the European and global level

Graph 49. International comparison of the economic contribution of core copyright industries as a percentage of GDP



⁵⁰ Robert G. Picard, Timo E. Toivonen, Mikko Grönlund: The Contribution of Copyright and Related Rights to the European Economy, Final Report, October 20, 2003.

⁵¹ Leo Kah Mun, Chow Kit Boey, Lee Kee Beng, Ong Chin Huat, Loy Wee Loon: Economic Contribution of Copyright-Based Industries in Singapore, October 2004.

⁵² Robert G. Picard, Timo E. Toivonen: The Economic Contribution of Copyright-Based Industries in Latvia, 2000.

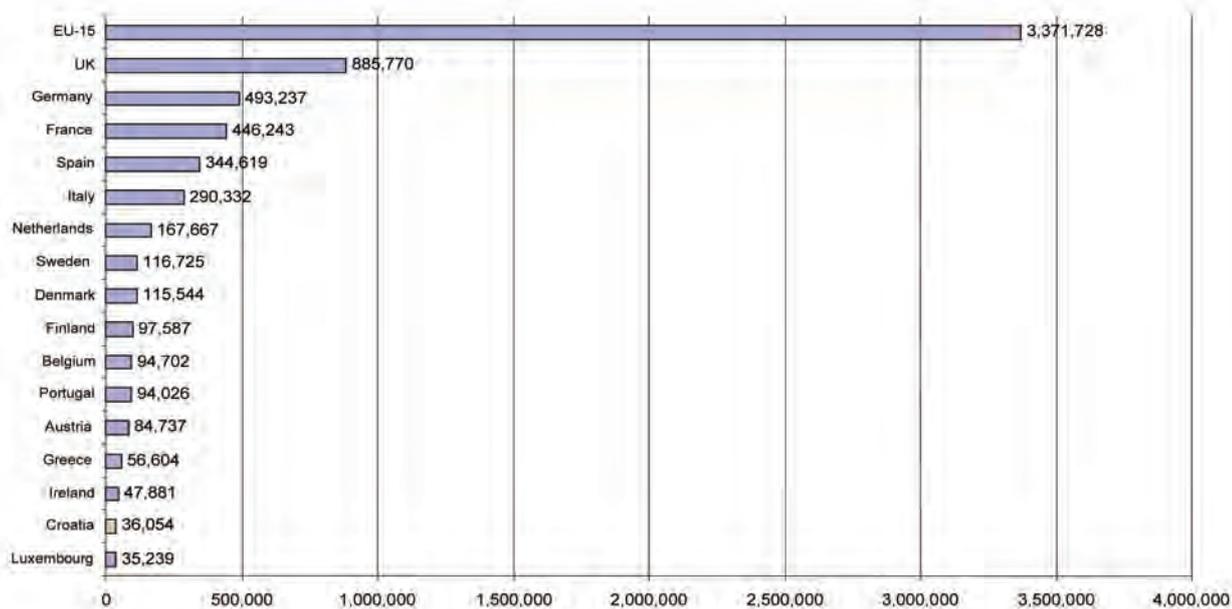
⁵³ Dr. Krisztina Penyigey, Dr. Munkácsi Péter: The Economic Contribution of Copyright-Based Industries in Hungary, Budapest, November 2005.

⁵⁴ Stephen E. Siwek: Copyright Industries in the US Economy, 2004 Report.

⁵⁵ The data obtained in the EU cover 2000, in the USA 2002, in Latvia 2000, in Singapore 2001 and in Hungary 2002.



Graph 50. International comparison of the economic contribution of core copyright industries as a percentage of number of employed



Graph 51. International comparison of the economic contribution of core and interdependent copyright industries represented in terms of number of employed

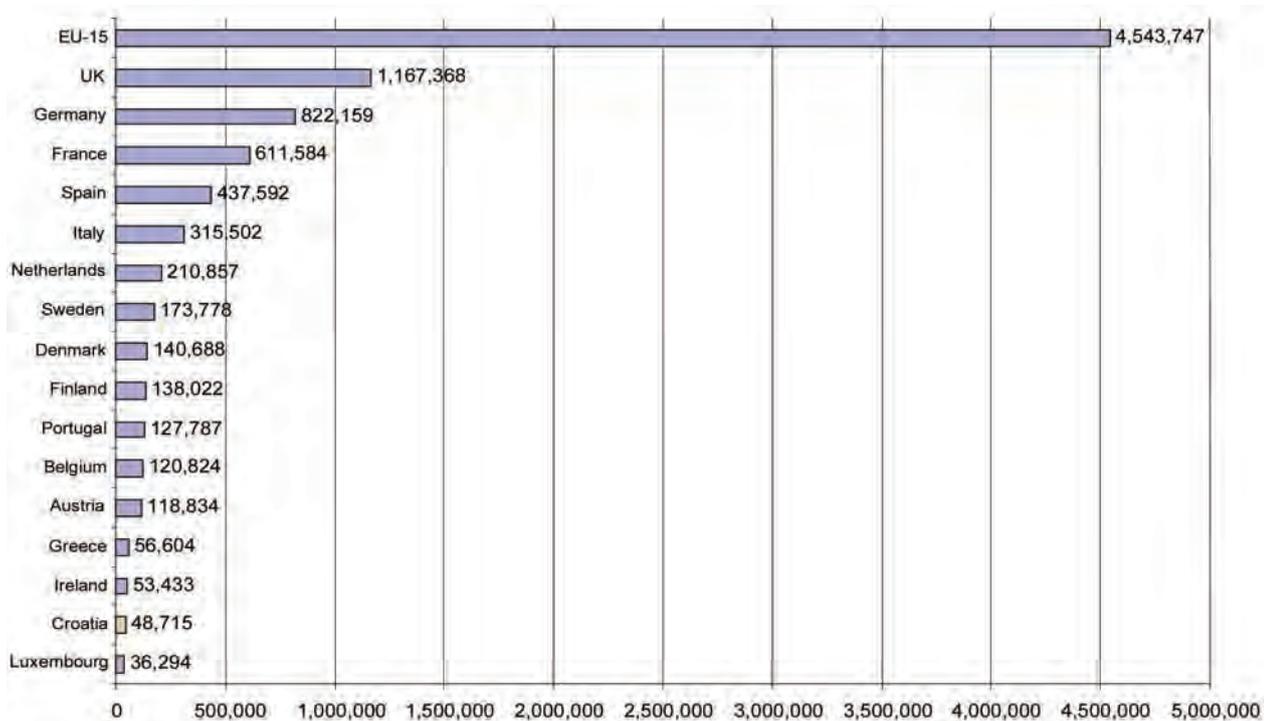


Table 6. Comparison of the structure of CBIs in 2002 in Croatia and in Hungary

CATEGORIES OF COPYRIGHT-BASED INDUSTRIES	CROATIA	HUNGARY
CORE COPYRIGHT INDUSTRIES	70.96	40.79
INTERDEPENDENT COPYRIGHT INDUSTRIES	19.68	46.40
PARTIAL COPYRIGHT INDUSTRIES	8.20	4.05
NON-DEDICATED COPYRIGHT INDUSTRIES	1.17	8.76
COPYRIGHT-BASED INDUSTRIES	100.00	100.00

Table 7. Comparison of the economic contribution of CBIs in 2002, in Croatia and in Hungary, measured as a percentage of GDP

CATEGORIES OF COPYRIGHT-BASED INDUSTRIES	CROATIA	HUNGARY
CORE COPYRIGHT INDUSTRIES	3.14%	3.95%
INTERDEPENDENT COPYRIGHT INDUSTRIES	0.87%	4.49%
PARTIAL COPYRIGHT INDUSTRIES	0.36%	0.39%
NON-DEDICATED COPYRIGHT INDUSTRIES	0.05%	0.85%
COPYRIGHT-BASED INDUSTRIES	4.43%	9.68%
TOTAL NATIONAL ECONOMY	100.00%	100.00%

5. Conclusion

With the implementation of this Study, an assessment taken from the National Strategy has been made in relation to the improved application of intellectual property as a development resource.

The economic contribution of copyright-based industries, which is seen through the contribution of those industries to gross domestic product, employment in those industries and their contribution to foreign trade, was explicitly determined on an internationally approved methodological basis.

The fact is that this Study implemented in collaboration by SIPO and CBS represents the beginning of the application of other measures from the same strategic package, and concerns the development of the content and structure of statistical data on intellectual property, their gathering, processing and publishing as a basis for reliable macroeconomic surveillance and decision-making on intellectual property in the economy of Croatia.

The aforementioned measure has been planned, as proposed by SIPO, within the 'Short-term and long-term measures for the prevention of the grey economy' of the Government of Croatia, which were devised and whose implementation is coordinated by the Ministry of Economy. We should emphasize, however, that this kind of research does not provide for the determination of the proportion of counterfeit and pirate products on the national market.

Their purpose is to value the positive side of the coin and to ensure that the instigators of relevant national policies have insight and a reliable background in order to decide on the allocation of resources for the purpose of creating and preserving values.

A different kind of methodology is required when it comes to evaluating the negative effects of the abuse of intellectual property rights. Preparatory work relating to the determination of a coherent and internationally accepted methodology for this kind of research has recently been completed under the auspices of WIPO; therefore it will soon be possible to conduct a study of that sort in Croatia.

The introductory part of the Study contains an indication of the aim of the National Strategy. Its essential role is "to ensure (within the medium term) the improvement of the use of intellectual property as a power tool for economic growth and an actuator of scientific, cultural and overall social progress until the average level of such use in the EU is reached or (in the long term) the level of such use in the leading EU countries." In such a context the Strategy indicates Ireland, Portugal and Austria as reference countries for the medium term, and Finland, Sweden and Denmark for the long term.

Taking the example of core copyright industries and comparing their contribution measured as a percentage of GDP with the same indicator taken for the countries mentioned (Graph 49), we reach the following conclusion:

- In Croatia, in the period under review, this indicator amounts to 3.14 per cent, a value which is higher than the values achieved in the reference countries in the medium term (Austria 2.3 per cent; Ireland 2.1 per cent and Portugal 1.9 per cent), but lower than the same values achieved in the countries chosen as reference countries for the long term (Finland 3.2 per cent; Denmark 3.7 per cent and Sweden 4.4 per cent).

- Croatia may be satisfied with such a position held by the core copyright industries in the international comparison, but the time series indicators, which would include trends for dynamic analysis, are not available.

Relevant decision makers and makers of policies related to economic aspects of copyright in Croatia should continue to implement consistently the measures contained in the National Strategy in order to achieve the desired level of use of intellectual property, in this case of authors' works and other subject matter relating to copyright and related rights, as well as an optimum relationship between the total public cost and benefit in this field.

This recommendation concerns, in particular, the medium-term and long-term measures referred to in Chapter VI of the National Strategy aimed at the improvement of the enforcement/exercise of intellectual property rights, which are, where the copyright and related rights are concerned, very important, as well as, the corresponding measures referred to in Chapter VII of the Strategy, related to statistical, taxation, financial, bookkeeping and other economic aspects of providing (acquiring) the protection and exploitation of intellectual property.

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The Economic Contribution of Copyright-Based Industries in Romania

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Executive Summary

Copyright-based industries (CIs) are a multidimensional sector which creates wealth and value in economic terms and contributes to social cohesion, self-confidence and better education in a globalized and multicultural world.

The economic dimension of the CI sector in Romania is worthy of closer interest for policymakers, given its increasing contribution to gross domestic product (GDP), employment, foreign trade and investment. No assessment of the CI economy in Romania has ever been made before, and such a task is both an attractive challenge and a heavy responsibility, not only for the authors of this study but also for a large number of stakeholders.

The economic contribution of CIs is becoming better understood thanks to an increasing demand for and consumption of creative-cultural goods and services and to the impact of education, which calls for greater quantities of cultural products and copyright works.

In spite of the wide variety of CI models of creation, production, distribution and use, we can find certain common features; these include the relatively short economic life of creations, cultural goods and services owing to rapid changes in technology, scientific behavior and fashion; a high risk of failure; strong international competition; market volatility; CIs' important role in communication and education; mass production and consumption; digitalization of production processes; and the interdependence of CIs and other economic sectors, to which they afford elements of creativity and innovation.

This study is the first piece of research carried out in Romania using WIPO standards, which make for more reliable inter-country data comparisons on the economic contribution of CIs.

The contribution of copyright industries to Romania's economy is analyzed mainly with the help of three relevant economic indicators, namely GDP (value added), employment and the value of exports and imports.

CIs' Contribution to Value Added/GDP

As Table 1 shows, the overall economic contribution of CIs represented 5.55 per cent of Romania's total GDP in 2005 as compared with 3.75 per cent in 2002.

Table 1. Share of CIs in GDP, 2002-2005 (%)

	2002	2003	2004	2005
Total CIs, of which:	3.75	5.34	4.59	5.55
Core	2.06	3.23	3.33	3.55
Interdependent	0.96	1.09	0.37	1.08
Partial	0.45	0.66	0.53	0.53
Non-Dedicated	0.28	0.36	0.36	0.39

Source: Calculation based on Ministry of Public Finance data

The core copyright industries made the most significant contribution to GDP, followed by the interdependent industries. The substantial increase in the CI share of GDP between 2002 and 2005 is explained by a high rate of growth in the sector, the decline in 2004 being due mainly to the influence of elections, which reduced partial and interdependent activities in favor of others devoted to political objectives. The volatility of non-core activity was more sensitive to "election fever".

The highest proportion of gross value added attributable to CI is that of the core industries (over 60 per cent from 2003 to 2005).

The real annual growth rate for the copyright industries collectively from 2002 to 2005 was 26.78 per cent, of which: 33.49 per cent was core, 15.57 per cent interdependent, 17.17 per cent partial and 24.21 per cent non-dedicated; the growth in CIs for that period exceeded real growth in the economy as a whole.

Labor Force and Employment

Copyright industries are an important area of activity in terms of the level of employment and the creation of full-time and part-time jobs, and the average qualifications of employees are higher in that area than those at the national level.

Table 2. Average Number of Employees in CIs and Their Components in Romania, 2002-2005

	2002	2003	2004	2005
Core	44.019	76.115	89.613	101.801
Interdependent	17.733	17.203	14.683	24.864
Partial	30.044	37.738	36.701	32.257
Non-Dedicated	11.821	15.524	16.800	18.528
Total Copyright	103.617	147.045	156.521	180.450
Total National	3,800.031	4,091.236	4,138.986	4,318.742

Source: Calculation based on Ministry of Finance primary data

Employment in CIs more than doubled from 2002 to 2005 as a result of lasting macro stability, the resumption of economic growth and relatively low employee numbers at the beginning of the period. Wage increases in some components of CIs (such as ITC, printing, television, etc.) were another factor. CIs employed 180,450 workers in 2005, or 2.36 per cent of Romania's total working population (see Table 2), thereby exceeding the figures for mining and quarrying (117,000), gas and water (135,000), hotels and restaurants (133,000) and public administration and defense (159,000).

The highest number of CI employees was found in the core industries and the lowest in the non-dedicated support industries.

The number of employees grew 1.5 times faster than the national average, or 2.6 times faster for core industries, 1.24 for interdependent and 1.4 for non-dedicated.

Table 3. Labor Productivity* for Total CIs, CI Components and the National Economy ('000 euro/employee)

	Years			
	2002	2003	2004	2005
Total CIs, of which:	7,370	7,842	7,750	10,458
Core	9,514	9,155	9,823	11,869
Interdependent	11,023	13,696	6,696	14,716
Partial	3,056	3,789	3,798	5,080
Non-Dedicated	4,872	4,863	6,119	7,224
Total National Economy	5,357	5,275	6,386	7,887

* Value added per employee.

Source: Calculation based on Ministry of Finance data

The productivity level for total CIs, core and interdependent, was higher than the national average for the entire period. For instance, total CI labor productivity was 32.5 per cent above the national level.

The core and interdependent sectors reached even higher levels, namely 50.5 per cent and 86.6 per cent respectively. The superior labor productivity figures for CIs highlight their significant growth potential in terms of competitiveness and efficiency on both domestic and international markets. For the whole period analyzed, the average annual growth rate in labor productivity was above the national average. The gross operational profit per employee in CIs recorded high and increasing values in total CIs, core, interdependent and non-dedicated, for the entire period (see Table 4).

Table 4. Ratio of Profit per Employee for CIs to Profit per Employee at the National Level (%)

	Years			
	2002	2003	2004	2005
Total CIs, of which:	139	185	145	153
Core	230	213	195	179
Interdependent	79	378	108	227
Partial	54	66	50	48
Non-Dedicated	102	122	118	111

Source: Ministry of Finance primary data

International Trade - Exports

From 2002 to 2005, the FOB (free on board) value of exports for CIs increased from 122.7 million to 177.1 million euros (1.44 per cent), while the share in total exports was 0.84 per cent in 2002 and 0.80 per cent in 2005. This share was relatively low, but still little different from that of some important commodities specific to the Romanian export trade.

Table 5. CI Exports, 2002-2005 ('000'000 euros)

CI Components	Years			
	2002	2003	2004	2005
Total CI Exports, of which:	122.7	147.1	152.3	177.1
Core	23.5	43.9	36.8	52.6
Interdependent	57.3	59.9	69.3	73.1
Partial	41.9	43.3	46.2	51.4
Total National Exports	14,675	15,614	18,935	22,255

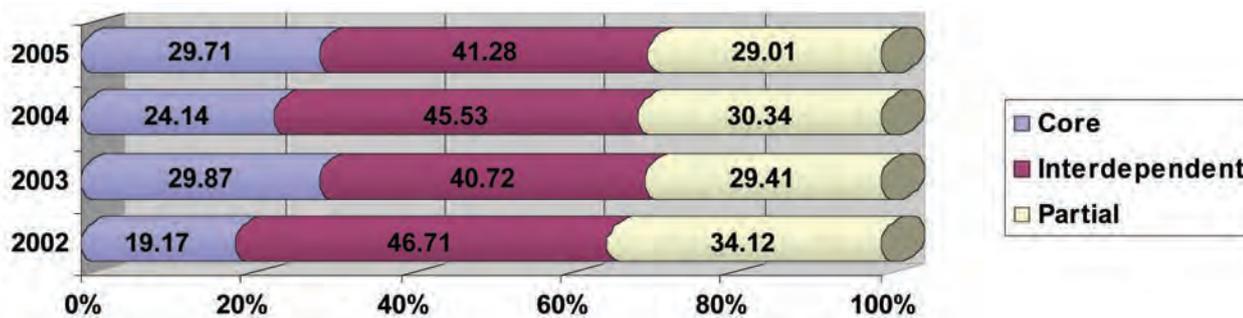
Source: National Institute for Statistics (NIS) database

In the period analyzed CIs followed an upward trend. They did however show annual fluctuations, which confirmed not only annual production variations due to internal factors and international circumstances, but also an inability to maintain Romanian exports at a constant level. These fluctuations are further explained by the influence of the "fashion" factor, implying a given creativity and an adjustment and absorption capacity possessed by the Romanian economy, which in our case is reflected in the modest power of Romanian companies to impose their own brands on domestic and external markets.

The average annual rate of growth in the exports of CIs from 2002 to 2005 was 13 per cent: the core industries recorded a value of 30.78 per cent, the interdependent industries 8.45 per cent and the partial industries 7.06 per cent; Core industry exports substantially exceeded the national average.

The average annual rate of growth in the exports of CIs was almost 2 per cent lower than the national average, i.e. 13.01 per cent compared with 14.89 per cent for the entire period, which leads us to the conclusion that the share of CI exports in the national total showed a downward trend.

Graph 1. Structure of Exports by CI Components, 2002-2005

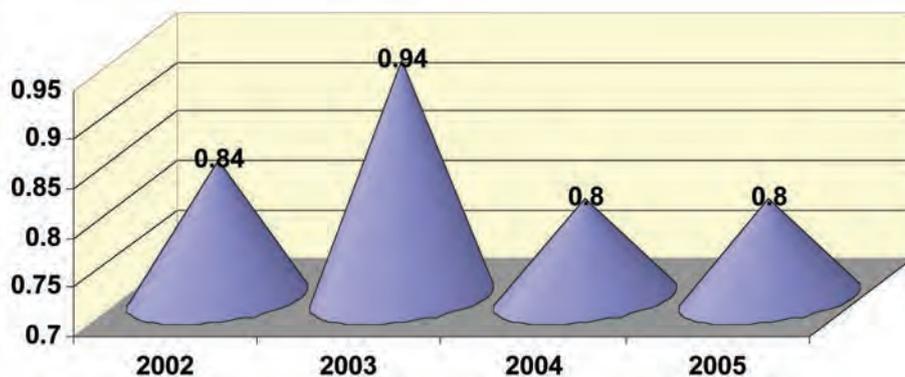


Source: NIS database

For the period analyzed, an increase will be noted in the core industries' share in the total exports of CIs, at 10.54 per cent, and a decrease in that of the non-core industries, which reveals the potential of the core industries for increasing their contribution to total national exports.

The share of the exports of copyright goods in total national exports ranged from 0.80 per cent to 0.90 per cent, which is modest compared with other countries, particularly the industrialized ones.

Graph 2. Share of CI Exports in Total Exports, 2002-2005 (%)



Source: NIS database

Imports

Imports of copyright-protected goods, as well as goods from related support industries, play a very important part in the specific activities of CIs. The volume, growth rate and structure of those imports have been analyzed using the same statistical and dynamic indicators as for exports.

Table 6. Volume of CI Imports ('000'000 euros)

CI Components	Years			
	2002	2003	2004	2005
Total CIs	205.9	263.9	330.5	424.9
Core	76.5	101.6	137.8	177.3
Interdependent	86.8	117.0	140.1	184.1
Partial	42.5	45.2	52.5	63.4
Total National Imports	18,881	21,201	26,281	32,568

Source: NIS database

CI imports doubled between 2002 and 2005. The highest increases were recorded by the core industries (over 130 per cent) and interdependent industries (over 110 per cent), both higher than the growth rate for national imports (70 per cent).

It is worth mentioning that CI imports showed a constant upward trend for all categories of products. Compared with exports, CI imports were more dynamic and showed steady growth, which is explained by the liberalization of Romania's international trade, the elimination of the State monopoly and the growing economic and social contribution of creative cultural imports.

Annual average growth rates for CI imports were: total CIs 27.3 per cent, core industries 32.33 per cent, interdependent industries 28.46 per cent and partial industries 14.20 per cent. Given that the average annual growth rate for Romanian imports as a whole was 19.93 per cent, CI imports significantly exceeded the national total.

As the imports of CIs grew faster than their exports, the differential between the two indicators rose from 1.6 in 2002 to 2.4 in 2005, which in turn led to a worsening of the CI-related trade balance deficit from 83.2 million to 247.7 million euros (Table 3.12). In other words, in the medium and the long term, CIs contributed to an increased deficit in the Romanian current account and foreign debt.

Table 7. CI Trade Balance ('000'000 euros)

	2002	2003	2004	2005
Core	-53,010	-57,731	-101,119	-124,719
Interdependent	-29,540	-57,171	-70,812	-111,022
Partial	-0,706	-1,936	-6,306	-12,043
Total Copyright	-83,256	-116,838	-178,237	-247,784

Source: NIS database

The share of total CI imports in the total import figure for Romania rose from 1.09 per cent in 2002 to 1.30 per cent in 2005. The greatest contributions to this result were made by the core industries (0.54 per cent) and the interdependent industries (0.57 per cent).

Romania is highly dependent on the import of CI goods, the volume of which is close to that of other important industries. The improvement in the trade balance involved State participation in promoting exports of copyright products to reduce the gap between the import and export of copyright works and related activities.

Introduction

Copyright-based industries (CIs) perform industrial activities that depend on intellectual property rights (IPRs) in general and copyright in particular.

From an economic viewpoint, copyright-based activities generate value added and income, create jobs and contribute to foreign trade.

The direct and indirect economic effects of CIs are felt, not only in production (value added), but also in consumption and distribution, by a large number of major and ancillary activities within the economy and in society.

The contribution of CI-related activities to gross domestic product or foreign trade in developed countries is quite significant, in certain cases exceeding that of the transport or construction sectors. Another characteristic of these activities is their growth rate over the past decade, which has been higher than the average growth rate of the national economy.

Research into the macroeconomic contribution of CIs in Romania is a novel scientific exercise for our country and pursues the following objectives:

- to express in quantitative and qualitative terms the contribution of CIs to GDP, employment and foreign trade in Romania;
- to analyze the main factors influencing the volume, growth rates, structure, productivity and profitability of the industries;
- to identify certain characteristics as elements for substantiating measures, programs and decisions in this field in the short, the medium and the long term;
- to make proposals for improvements to the statistical information systems of CIs, including data gathering and processing according to the methodological findings of the World Intellectual Property Organization (WIPO), and on the basis of the favorable experiences of other countries.

Our study reflects pioneering research in Romania. It has faced a series of challenges and difficulties inherent in a new area of research on the circumstances of transition to a market economy and preparations for accession to the European Union (EU), and others due to the demands of globalization and sustainable development.

The difficulties encountered have been, in order of magnitude: a lack of adequate statistical and economic data and other information needed to carry out the objectives of the study in a satisfactory manner; the very heavy workload represented by the collection and processing of data according to WIPO classification methods, and the lack of certain reference works in the technical literature of our country.

Understanding the economic contribution of CIs has caused us to take into consideration, directly or indirectly, many cultural, economic, legal, technological, social, political and environmental determinants at the national and the international level. Considered one of a number of contemporary types of "growth engines" CIs require a special effort to be made to distinguish their direct and indirect effects in quantitative and qualitative terms.

The present study was initiated by WIPO in partnership with the Romanian Intellectual Property Organization (RIPO), the Ministry of Culture and Religious Affairs (MOCRA) and The Center for Research on Culture

(under the auspices of MOCRA). The research team was coordinated by Liviu Chelcea, Director of the Center for Research on Culture, and Delia Mucică, who was Secretary General of the Ministry of Culture and Religious Affairs at the start of the research. The research team consisted of members of the above institutions plus two researchers from the Institute of National Economy (under the auspices of the Romanian Academy).

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Chapter 1 Legal and Institutional Framework

1.1. Legal Framework Before 1989

Viewed several hundred years ago as an insignificant legal concept, copyright has since become a fundamental right for a large area of the world, including Romania. Up to the second half of the 19th century copyright followed some very interesting paths as it evolved in our country. The importance accorded to intellectual property (IP) within the three Romanian countries was seldom recorded in the documents of the time.

On April 1, 1862, during the reign of Alexandru Ioan Cuza, immediately after the Moldavian and Wallachian principalities were merged into a single Romanian State, the Press Law was adopted. It introduced certain copyright rules relating to artistic and literary creations, which had previously been deeply rooted in French legislation dating from 1793. The Romanian Law has been amended several times, and from 1904 onwards has provided for an exclusive right of reproduction and sale (distribution), and also the right to assign a work, with sanctions and other remedies in cases of infringement of those rights (use of the work without the author's permission). Protection of rights was granted to the authors during their lifetime and to their descendants for a period of ten years thereafter.

At the beginning of the 20th century copyright entered into a new era, with several important events taking place in Romania. One such event, of European significance and with a major impact on Romanian copyright legislation, was the 29th Congress of the International Literary and Artistic Association, which took place in 1906. This event brought together important personalities in the fields of copyright and artistic or literary creation from Europe and Romania, including Henri Morel, the Director of BIRPI (which eventually became WIPO) in Berne, Switzerland, Camille Flammarion, Auguste Rodin, R. Strauss, H. Sudermann, Jules Lhermina, George Maillard, Albert Osterrieth, Charles Bartaumiens, P. Castori, Cav. Penso, Auguste Bernaert, George Enescu, C. Dissescu, Constantin Hamangiu and Barbu Ștefănescu Delavrancea.

On June, 25 1923, the Romanian Parliament voted Law No 126/1923 on Literary and Artistic Property (Of. Monitor No 68/28.06.1923), which was the first modern copyright law in Romania. One of its important provisions granted protection not only to nationals of Romania, but also to foreign authors, and without a reciprocity clause. Authors enjoyed a lifetime exclusive right to authorize the reproduction, translation and adaptation of their works, as well as the publishing and performance thereof. They could also exploit or sell their works or dispose of them by affidavit or donation. Legal heirs were granted the same rights for 30 years after the author's death.

After the Second World War Law No 126/1923 was amended by the following enactments: Decree No 596/1946 on Publishing Agreements and the Copyright in Literary Works; Decree No 17/1949 on Book Publishing and Distribution; Decree No 19/1951 on Works Susceptible of Being Printable; Decrees Nos 428/1952 and 591/1955 Governing Contracts on, and the Acquisition and Exploitation of, Art Works and Museum Exhibits.

Once the Communist regime was in power, Decree No 321/1956 on Copyright (Of. B. No 18/27.06.1956) became the basic statute governing the field in Romania, and remained so for 50 years, until 1996.

1.2 Legal Framework After 1989

With the end of Communism in 1989 Romania started its return to the status of a European country, and the various tasks involved in the reconstruction of civil society included the design of an appropriate framework for a copyright law and its effective enforcement.

So Law No 8/1996, on Copyright and Related Rights (Of. M. No 60/26.03.1996), entered into force on June 25, 1996. This provided the foundation on which, through subsequent amendments and additions in succeeding years, a modern, comprehensive and more effective law, fully compliant with the *acquis communautaire* in the field of copyright was constructed.

Of the later modifications to this framework to bring it fully into conformity with EU legislation (a precondition of Romania's entry into the EU), we would mention the following: Law No 285/2004 (Of.M.No 587/30.06.2004, in force from July 30, 2004); E.O.G No 123/2005 (Of.M.No 843/19.09.2005), and Law No.329/2006 Approving, with Amendments, E.O.G. No 123/2005 (Of.M.No 657/31.07.2006, in force from August 3, 2006).

With a view to better regulation within the copyright system and a better coverage of all aspects of this very active field, the main legal provisions enshrined in Law 8/1996 and its later amendments were complemented by the following secondary legislation: Government Decision No 974/2001 approving the cooperation program between the Romanian Government and WIPO (Of. M. No 656/18.10.2001, in force as of the date of publication); Government Decision No 1424/2003 approving a national strategy for copyright between 2003 and 2007 (Of.M. No 905/18.12.2003), amended and completed by Government Decision No 1174./2005 amending and completing the Annex to Government Decision No 1424/2003 on the implementation of the action plan for a national strategy in the field of copyright (Of. M. No 927/18.10.2005); Government Decision No 1095/2000 approving the methodological standards governing the disposal and destruction of pirate media, materials, phonograms, holographic marks or covers confiscated under the law (Of. M. No 608/27.11.2000); Government Emergency Ordinance No 190/2005 on the measures necessary for EU integration (Of.M. No 1179/28.12.2005); Government Ordinance No 25/2006 increasing the administrative capacity of the Romanian Office for Copyright (Of. M. No 84/30.01.2006, in force from March 1, 2006), and Government Decision No 401/2006 on the organization, operation, assets and organization chart of the Romanian Office for Copyright (Of. M. No 292/31.03.2006). At the same time it must be emphasized that the Basic Law, Romania's Constitution, as revised after the restoration of democracy, includes provisions relating to intellectual property: free expression is guaranteed and protected (Art. 30), as are the right to information (Art. 31), access to culture (Art. 33) and the right to private property .

At the international level, Romania has ratified numerous treaties, agreements and conventions relevant to copyright. We start with 1926 when, on March 24, by Law No 152, Romania joined the *Berne Convention for the Protection of Literary and Artistic Works*, as revised by the Berlin Act of November 13, 1908, which came into force for Romania on January 1, 1927. Romania has also ratified some of the later Acts of the Berne Convention, namely the Stockholm Act of July 14, 1967, by Decree No 1175/1968 (Of. B. No 01/06.01.1969) and the Paris Act of July 24, 1971, by Law No 77/1998 (Of. M. No 156/17.04.1998).

Another very important convention in this field is the *International Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations* (Rome Convention) of October 26, 1961, to which Romania became party by Law No 76/1998 (Of. M. No 148/14.04.1998).

Moreover, faced with the exponential development of digital technology, viewed as a new way of exploiting copyright-protected creations, WIPO and the member States of the Berne Union were mindful of the need to create new international, legally binding instruments that would adequately protect intellectual creations, including works, products or other subject matter of copyright or related rights.

On December 20, 1996, in Geneva, two international treaties, known as the “Internet Treaties”, the *WIPO Copyright Treaty (WCT)* and the *WIPO Performances and Phonograms Treaty (WPPT)*, were signed; they came into force on February 6 and May 20, 2002, respectively.

Romania signed both treaties in December 1997 and the Romanian Parliament ratified them on February 1, 2001, the *WCT* by Law 205/2000 and the *WPPT* by Law 206/2000 (both in Of. M. No 609/27.11.2000). Also at the international level, it should be mentioned that Romania became a founder member of the World Trade Organization (WTO) by its signature of the Marrakesh Agreement on April 15, 1994, which the Romanian Parliament ratified by Law No 133/1994 (Of. M. No 360/27.12.1994).

Annex IC of this Agreement is relevant to copyright: it is called the Agreement on Trade-Related Aspects of Intellectual Property Rights (or TRIPS Agreement), and it entered into force on January 1, 1995. It provides flexible periods for the mandatory application of the Agreement by signatory States, with one year as the general rule, five years for developing countries and countries in transition to market economy (like Romania) and ten years for the least developed countries (LDCs), with the exception of TRIPS Articles 3, 4 and 5, which apply to all signatory States. The remaining TRIPS provisions became mandatory for Romania on January 1, 2000.

At present Romania's copyright and related rights legislation is fully harmonized with that of the EU, in compliance with the provisions of all eight Directives of the European Council and Parliament.

Specifically, Law No 8/1996 incorporated the provisions of the following European Directives in national legislation: 91/250/EEC of May 14, 1991, on the Legal Protection of Computer Programs; 92/100/EEC of November 19, 1992, on Rental and Lending Rights and on Certain Rights Related to Copyright in the Field of Intellectual Property; 93/83/EEC of September 27, 1993, on the Coordination of Certain Rules Concerning Copyright and Related Rights Applicable to Satellite Broadcasting and Cable Retransmission; 93/98/EEC of October 29, 1993, Regarding the Harmonization of the Term of Protection of Copyright and Certain Related Rights, and 96/9/EC, dated March 11, 1996, on the Legal Protection of Databases.

Law No 285/2004 incorporated the provisions of Directive 2001/29/EC of May 22, 2001, on the Harmonization of Certain Aspects of Copyright and Related Rights in the Information Society.

Finally, Government Emergency Ordinance No 123/2005, approved by Law No 329/2006, incorporated in national legislation the provisions of the last two Directives in the copyright field, 2001/84/EC of September 27, 2001, on the Resale Rights of the Author of an Original Work of Art and 2004/48/EC of April 29, 2004, on the Enforcement of IPRs (intellectual property rights).

1.3 Copyright Law Enforcement and Administrative Capacity

The field of copyright attracts much attention in Romania, a fact highlighted by the existence of an action plan set in place by Government Decision No 1174/2005. Its strategic objectives include the enhancement of the administrative capacity of the Romanian Intellectual Property Organization (RIPO) and the achievement of effective cooperation between State institutions with prerogatives in copyright enforcement, coordinated by the Public Prosecution Service.

Thus it was that on June 26, 2006, the Multilateral Protocol for the Constitution of the Copyright Working Group was signed by its 32 members and settled. The members on the one hand represented those authorities whose prerogatives related to copyright enforcement, namely the Inspectorate General of Police, the Inspectorate General of Border Police, the National Customs Authority, the General Prosecutor's Office, the Ministry of Justice, the Financial Guard, the Office for Copyright and the Patent and Trademark Office (OSIM), and on the other were representatives of copyright owners (collective management bodies), including anti-piracy organizations in the musical, audiovisual or software fields, the Phonogram Producers Union of Romania (IFPI Romania,) the Romanian Organization Against Copyright Theft (RO-ACT), the Business Software Alliance, Electronic Arts and Vivendi Universal Games. The Working Group is made up of three subgroups, each with precise functions such as anti-piracy and anti-counterfeiting, and also collective management bodies for copyright and related rights.

The leading authority in the copyright and related rights field is the Romanian Office for Copyright (ORDA), established when Law 8/1996 entered into force as a specialist Government body with a judicial function, being the only national authority currently charged with supervising, authorizing, arbitrating and exercising technical and scientific functions in the copyright and related rights field under the coordination of Ministry of Culture and Religious Affairs.

ORDA is actively involved in the consolidation and development of Romania's IP system, its aim being to provide a stimulating cultural and economic system for genuine creations, fully capable of guaranteeing protection and turning results to account.

ORDA is also permanently concerned with improving national copyright legislation, harmonizing it and bringing it up to date in line with European and international judicial enactments. Apart from that it is making significant efforts towards better law enforcement through the intensification and extension of measures for national evidence, warning and examination, and by increasing awareness regarding the use of and respect for copyright and related rights. The latter is mainly achieved through training for the business sector, copyright owners, users and public authorities and through public information campaigns. By promoting values and principles such as transparency and dynamism, creativity and innovation and respecting and improving traditions, and also through responsibility and professionalism, ORDA is contributing to the consolidation of civil society, and at the same time it is bringing increased public awareness of the importance of effective protection for copyright owners and other stakeholders by providing a model for the observance of copyright and related rights legislation.

By constantly developing and consolidating its management capacity, ORDA has perfected a system of control of the legality of copyrightable products circulating in Romania, and lowered the incidence of piracy in fields such as music, audiovisual material, software and the like.

Government Decision No 401/2006 sets the maximum number of posts at ORDA at 92, most of them assigned to the Expertise and Findings Department. High staff numbers are necessary for the provision of expertise and technical-scientific findings in connection with the work of the city, State and financial police.

To that end 1,030 examinations were conducted in 2006 on 199,554 copyright-eligible products (131,530 CDs and DVDs, 6,457 audiocassettes, 703 VHS cassettes, 304 hard disks, 60,148 covers and 412 other items). In the same year, of a total of 152 cases investigated by the Office of the Prosecutor General that resulted in prosecution, 117 were based on ORDA examinations and concerned copyright and related rights infringements.

ORDA personnel spent 256 days on technical-scientific activities and on supporting supervision and control work in localities outside Bucharest, in the course of which they carried out specific activities covering practically all the "hot" zones for pirated products on Romanian territory.

In 2006, according to the National Register of Phonograms, 13,321,671 holographic stickers were issued and 14,808 titles registered. The National Register of Video Recordings showed 3,581,575 holographic stickers issued for 1,719 titles registered, and the National Register of Software Programs contained 5,401 software programs.

On five occasions starting in 2001, in order to alert the general public to the enforcement of copyright and related rights and to discourage possible violations, ORDA organized the public destruction of pirated material, destroying a total of 550,000 objects.

1.4 Collective Management Bodies

Collective management bodies are private legal entities, established by the free association of the owners of copyright and related rights, their main activity being the collection and distribution of any payments whose administration has been entrusted to them by those owners. They operate according to the regulations regarding non-governmental associations (OG 26/2000), as amended, and the special provisions of Law 8/1996 on Copyright and Related Rights.

These bodies have been directly created by copyright owners; they administer the rights of different categories of copyright owners from different creative fields, and their activity is overseen by ORDA. Collective management bodies are obliged to devise methodologies for their fields of activity, including the setting of tariffs, which have first to be negotiated with the users, to pay for the rights in works whose exploitation individual copyright owners cannot authorize themselves.

They also authorize users in exchange for remuneration, issuing a non-exclusive, official license; acting in the copyright owner's name, they enter into general contracts with the users, the main purpose of the contracts being the licensing of the use of the protected repertoire.

One important role of collective management bodies is the protection of their members' interests outside Romania under representation contracts entered into with foreign counterparts.

Their main task however is the collection and distribution of payments owed to copyright owners.

To do that they need to maintain contact with the users or their intermediaries, communicating information and forwarding any documentation necessary for the remuneration to be worked out correctly, and processing any information regarding actual use of the works, with the name of the copyright owner mentioned, so that the remuneration may be allocated.

At the same time, collective management bodies are obliged to assure their members of access to information on any aspect of the payments due as a result of their collection activities; they offer specialized

assistance to copyright owners and represent them in legal procedures. In the course of their activities they ensure the transparency of their collective administration work in dealings with public authorities with supervisory prerogatives, and engage in any other activity consistent with the special mandate given them by the owners of copyright and related rights.

Eight collective management bodies are operating in Romania at present, their main function being to administer different kinds of rights - copyright and related rights - collect any sums payable and distribute them to their members.

Four bodies operate within the copyright category: COPYRO administers the copyright in written works; the Society of Romanian Audiovisual Writers (DACIN SARA) the rights in cinematographic and audiovisual works; the Musicologists and Composers Union of Romania (UCMR-ADA) the rights in musical works and the Society for Collective Copyright Management in the Visual Arts Field (VISARTA) the rights in visual art works.

Four other collective management bodies operate in the field of related rights: the Romanian Phonogram Producers Union (UPFR) administers the rights of major phonogram producers and the Association for the Phonogram Producers of Romania (ADPFR) handles the rights of small Romanian phonogram producers, while the Romanian Center for Performers Rights Administration (CREDIDAM) takes care of performers and UPFAR-ARGOA administers the rights of the producers of audiovisual and cinematographic works.

COPYRO was approved as a copyright collective management body for written works, entitled Literary Fund by RIPO Director General Decision No 8/1997; it has been a member of the International Federation for Reprographic Rights Organizations (IFRRO) since 1998 and had observer status in the International Confederation of Societies of Authors and Composers (CISAC) since 1999. It collects the remuneration payable to authors for their written works; it is also the sole collector of remuneration for private copying (A4 sheets) in the graphic field, and of that payable to rights holders for private copying on physical media or devices. In addition, COPYRO collects its members' royalties for television and radio broadcasting, cable retransmission, stage performance and private copying. At the end of 2006 this body had 1,553 registered members and had entered into reciprocity contracts with counterparts in France, Greece, Russia and Spain.

DACIN SARA has been authorized to represent the rights of cinematographers and authors of other audiovisual works. It was established by RIPO Decision No 1/24.03.1997 and is a member of the International Collective Management Association of Audiovisual Works (AGICOA) and the International Association of Audiovisual Writers and Directors (AIDAA). It collects the remuneration due for public broadcasting, cable retransmission and private copying in the audiovisual field. At the end of 2006 DACIN SARA had 185 registered members and had entered into reciprocity contracts with 12 similar collective management bodies in countries such as Belgium, Germany, Italy, the Netherlands, Poland, Portugal, Slovenia, Switzerland and the United Kingdom.

UCMR-ADA is the body that administers the rights of authors and composers of musical works. It was approved as a collective management body by RIPO Decision No 3/24.03.1997; it is a member of CISAC and BIEM (*Bureau international des sociétés gérant les droits d'enregistrement et de reproduction mécanique*), the international organisation representing mechanical rights societies, it collects remuneration for all musical works performed in public theaters, by touring companies, in broadcasting and in cable retransmission, as well as for private copying in the sound and audiovisual field, for the reproduction of musical works on phonograms and video recordings and for their use as telephone ringtones and on the

Internet. At the end of 2002, it had 4,975 registered members and had entered into reciprocity contracts with 50 similar collective management bodies in many countries, namely Albania, Argentina, Armenia, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Canada, Chile, China, Croatia, Cuba, the Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, Israel, Italy, Japan, Latvia, Lithuania, Mexico, Moldova, the Netherlands, Norway, Portugal, Serbia, Slovakia, Spain, Sweden, Switzerland, The Former Yugoslav Republic of Macedonia, Turkey, Ukraine, the United Kingdom, the United States of America, Uruguay and Venezuela.

VISARTA is another Romanian collective management body that collects copyright royalties, and it is authorized to do so by virtue of ORDA Decision No 8/01.06.1999. It also has CISAC and IFRRO observer status, and collects remuneration for cable retransmission, reproduction and resale rights, as well as compensatory remuneration for private copying in the field of graphics. At the end of 2006 VISARTA had 168 registered members and had entered into reciprocity contracts with 20 similar collective management bodies in Australia, Austria, Canada, Chile, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Latvia, Lithuania, Mexico, Norway, Peru, Portugal, Spain and the United Kingdom.

As previously mentioned, there are at present four collective management bodies for related rights in Romania.

UPFR was authorized as a collective management body for the producers of phonograms by ORDA Decision No 5/24.03.1997; it is a member of the International Federation of the Phonographic Industry (IFPI). At the end of 2006 UPFR had 34 registered members in Romania. It collects remuneration for the radio and television broadcasting of phonograms for commercial purposes, communication to the public and cable retransmission, and also for private copying in the sound and audiovisual fields.

CREDIDAM was authorized as a collective management body for the related rights of performers by ORDA Decision No 4/24.03.1997. It is a member of AEPO-ARTIS, SCAPR and IPDA (IPD II). Its main role is to collect remuneration for the broadcasting on radio and television for commercial purposes of performances fixed on phonograms, for cable retransmission and for private copying in the musical and audiovisual fields, for public (theater) performance and for communication to the public. At the end of 2006 CREDIDAM had 5,756 registered members and had entered into reciprocity contracts with 30 similar collective management bodies in Austria, Belgium, Bulgaria, Canada, Croatia, the Czech Republic, Denmark, Estonia, France, Germany, Greece, Hungary, Ireland, Italy, Lithuania, the Netherlands, Poland, Russia, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

UPFAR-ARGOA was authorized as a collective management body for audiovisual and cinematographic producers by ORDA Decision No 9/13.08.1999, and is an AGICOA member. At present it collects the remuneration payable to its members for communication to the public (as background and for profit), broadcasting, cable retransmission and private copying in the audiovisual field. UPFR-ARGOA had 54 registered members at the end of 2006 and reciprocity contracts with five similar collective management bodies in Belgium, Germany, Spain, Sweden and Switzerland.

The final collective management body, established in 2006 by RIPO Decision No 206/30.06.2006, is ADPFR, which manages the related rights of small producers of phonograms and has seven founder members. It should be stressed that the evolution of collective management bodies in Romania is linked to increased awareness and acknowledgement, on the part of copyright owners, of the importance both of their works and of a profitable copyright management climate. It also has a great deal to do with users' perception of the legal capital inherent in copyright creations. In most cases the consumers of CI products have not been

conscious of their close relation to copyright.

The significant level of up-to-date copyright protection in Romania, especially since the entry into force of the 1996 Copyright Law, has brought about real changes in the form of new business models, in both quantitative and qualitative terms. The considerable progress of creative industries is best illustrated by the levels of publishing activity (from just one State publishing house to more than a thousand), broadcasting activity (from one public radio and television station to several hundred) and phonogram production (from a single State phonogram producer to several hundred), and also by the growth in communication and information technology (from a few enterprises to hundreds of small and medium-sized enterprises (SMEs), some of them boasting an international reputation, especially in software production), not to mention the entertainment industry, which actively targets a variety of areas.

Chapter 2

Methodology

Determining the economic contribution of CIs has become an area of interest, especially from the theoretical-methodological and practical viewpoints, owing to their increasing role in production, distribution and consumption, in adjusting the business environment to various priorities and socio-economic requirements and in substantiating certain micro and/or macroeconomic decisions in investment, foreign trade, technology transfer and institutional-legal provisions governing IPRs.

It is a well-known fact that post-industrial society is characterized by the emergence and development of the “new economy” or knowledge-based economy, its driving force being factors such as intangible assets based on information technology (IT) and telecommunications (ICT). It is acknowledged that ICT has on the whole revolutionized the economy and society, especially those aspects that have to do with IP protection and remuneration, as copyright goods and services form a substantial part of e-commerce.

The CI concept, as explained in the WIPO Guide (*WIPO Guide on Surveying the Economic Contribution of Copyright-Based Industries, 2003*), is constituted by groups of activities with a certain dimension and structure “which can be statistically identified and measured”, including the following categories:

- (a) Core copyright industries (the “nucleus” of the CI);
- (b) Interdependent copyright industries;
- (c) Partial copyright industries;
- (d) Non-dedicated support industries.

The specialized literature makes use of additional categories, in parallel with the CI concept, that are more or less related, or have a higher or lower degree of overlap or demarcation, such as “cultural industries” or “creative industries” (Caves R.E., 2000). Cultural industries are regarded as an auxiliary sector of the creative industry and include tourism and cultural heritage, museums, libraries, sports and a wide range of other cultural events at the local, national and international levels. At the same time they focus on supplying certain social and cultural values, and not necessarily those measurable in monetary terms.

Creative industries are a key element of the knowledge-based economy, which in the future will foment more initiatives aiming to make use of the cultural heritage to develop tourism, people’s ideas and imagination as assets of increasing importance (Towse R., 2002).

CIs are characterized by the fact that once copyright goods have been produced, the process of their reproduction and distribution involves much lower costs, especially for those in digital form. Supplying the market with a creative work at a relatively low marginal cost for reproduction and distribution will not at first generate the income required for recovering total production costs.

2.1 Information and Data Sources

The statistical information for measuring the economic contribution of CI goods and services has been taken from the following sources:

- statistical data from the Romanian Chamber of Commerce and Industry regarding numbers of companies; profits and turnover for the 2002-2005 period at current prices;

- financial and accounting data from the Romanian Ministry of Finance (balance sheets and profit and loss accounts) for production, value added, employment (average number of employees expressed in terms of the full-time equivalent), cost structure for the four CI categories and for the data at national level in the 2002-2005 period (which bore some resemblance to the methodology for determining the indicators of statistical-financial reporting based on the balance sheet) in accordance with the CANE four-digit classification;
- foreign trade data (exports FOB, imports (CIF), trade balance) provided by the National Institute of Statistics (NIS) for the 2002-2005 period.

An estimate of the share of the economic contribution in the three non-core industries (interdependent, partial and non-dedicated support) was made using questionnaires and interviews for each non-core group. We also used comparisons with the copyright factor from other countries, especially to obtain benchmarks, control figures or confidence intervals. For the interdependent industries, a 100 per cent share of the economic contribution of copyright activities (i.e. a copyright factor of 1.0) was not applied, as was done in other national studies.

The shares of the copyright factor that we used differed to varying degrees from those used in other countries.

Efforts were made to estimate the annual weight of copyright factors for each component of the non-core industries, taking into consideration the percentage share of CI activities in turnover, value added and employment for the most important firms included in the survey.

The three categories of percentage shares (in turnover, value added and employment) were used to determine an aggregate index based on weighted average, corroborated by the estimates and approximations in answers to questionnaires and in interviews. The idea of using a constant average copyright factor for the whole period was considered unsuitable by specialists. Their judgments and arguments in favor of annually-differentiated copyright factors related mainly to the variations in an emergent transition economy characterized by variable changing structures.

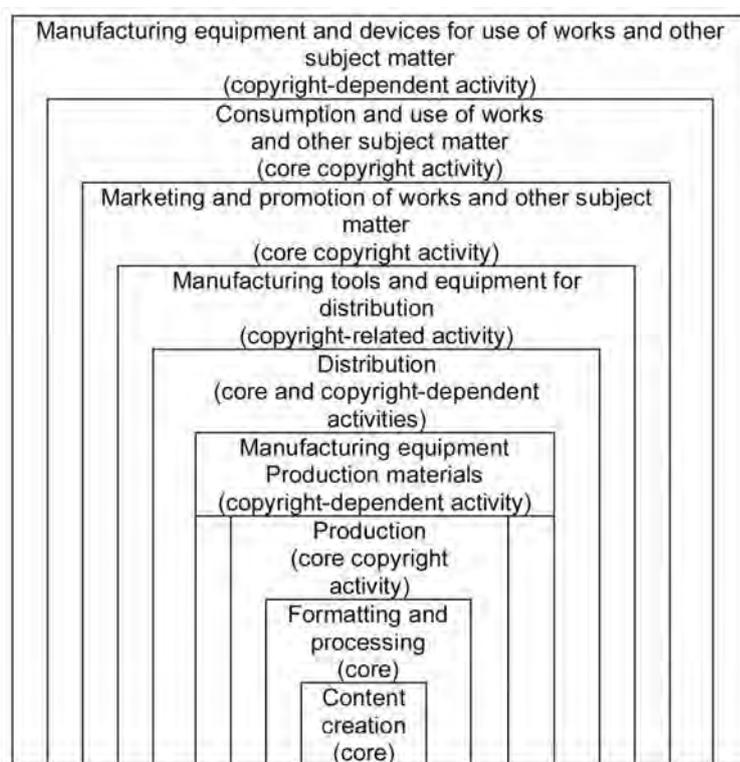
The value of imports and exports is based on FOB prices for exports and CIF prices for imports. Imports and exports do not include goods in transit, goods that have temporarily entered or left the country (unless for processing), goods purchased by international organizations for their own use in Romania or goods sent for repair.

CIs are characterized by a strong spillover or radiation effect, the nature, amount and intensity of which are specific to each sector and give differing levels of importance to their economic and social contribution. In terms of input-output analysis, copyright activities in Romania distributed their goods and services to 74 out of a total of 105 branches of the national economy in 2004.¹ There are fewer upstream delivery branches to CIs.

¹ Calculations on the basis of Input-Output Tables for 2003 in National Accounts 2002-2003, National Institute of Statistics, Statistical Studies and Analyses, 2006, pp.125-154



Figure 1. Layers of Economic Activity Related to the Production, Packaging and Distribution of Material Protected by Copyright and Related Rights



Source: The Contribution of Copyright and Related Rights to the European Economy, *Final Report 2003*, p.18, and *WIPO Guide*

Adjusted GDP is the main macroeconomic aggregate of national accounts, representing the final results of the production activity of resident production units, and has been calculated according to the income approach. It does not include import duties, product subsidies or estimates for the unofficial economy and the informal and informal sectors (underground labor and value added tax evasion, undeclared input of family associates and the self-employed).

2.2 Core Copyright Industries

These are the activities that generate end products heavily dependent on copyright protection and based entirely on it. In other words, this basic classification of industrial-creative activities applies to the creation, manufacture and processing, distribution or sale of works or other copyright-protected products. Core industries have been regarded as making a 100 per cent contribution to creating value added in the national economy.

On the basis of the WIPO and ISIC² classifications for core industries, and also that for products and activities in Romanian statistics, the following 31 industries conforming to the CANE³ code were included.

² UN Activity Classification – ISIC Rev.3.1 <http://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=17&Lg=1>

³ CANE Rev 1 – the new version of the National Economy Activities Classification approved by Order No 601/26.11.2002 (OM. No 908/13.12.2002). The first CANE version, approved by Governmental Decision No 656/1997, was designed to ensure the identification and codification of all activities in an integrated system in compliance with the stipulations of Council Regulation 3037/1990 of the European Economic Community and harmonized with the Activities Classified List of the European Community, NACE Rev 1. In 2001 the National Institute for Statistics initiated the lining-up of the new version of European classification NACE Rev 1.1 as part of the strategy of harmonizing Romanian statistics with European statistical regulations and standards, which corresponds to the tasks assumed under Chapter 12 (Statistics) of Romania’s EU Accession dossier (see <http://recom.onrc.ro/obco.htm> CANE Rev 1 - the new version of the National Economy Classification).

Table 2.1. Core Copyright-Based Industries

CANE CODE	DESCRIPTION
2211	Book publishing
2212	Newspaper publishing
2213	Publishing of journals and periodicals
2214	Publishing of sound recordings
2215	Other publishing
2221	Printing of newspapers
2222	Printing n.e.c.
2223	Bookbinding
2224	Pre-press activities
2225	Ancillary activities related to printing
2231	Reproduction of sound recordings
2232	Reproduction of video recordings
2233	Manufacture of television and radio receivers, sound or video recording or reproduction apparatus and associated goods
7221	Software publishing
7222	Other software consultancy and supply
7230	Data processing
7240	Database activities
7440	Advertising
7481	Photographic activities
9112	Activities of professional organizations
9211	Motion picture and video production
9212	Motion picture and video distribution
9213	Motion picture projection
9220	Radio and television activities
9231	Artistic and literary creation and interpretation
9232	Operation of arts facilities
9233	Fair and amusement park activities
9234	Other entertainment activities n.e.c.
9240	New agency activities
9251	Library and archive activities
9272	Other recreational activities n.e.c.

Core industries were selected according to the nine WIPO groups which comprise the following: press and literature; music, theater and opera; movies and video; radio and television; photography; software and databases; visual and graphic arts; advertising services and collective copyright management.

2.3 Interdependent Copyright Industries

These industries are involved in the production, processing and sale of equipment whose integral or main function is to facilitate the creation, production or use of copyright-protected works or products (WIPO Guide, 2003).

Interdependent industries ensure a functional relationship between copyright production and business services, transport, purchasing production factors and investment goods. They are characterized by their complementarity in relation to core industry activities and by the interface between them and other related activities. Our study used the classified list of interdependent industries set out in Table 2.2 in accordance with Groups 1 and 2 from the WIPO Guide.



Table 2.2. List of Interdependent CIs

CANE Code	Description
2112	Manufacture of paper and paperboard
2123	Manufacture of other articles of paper and paperboard
2464	Manufacture of photographic chemicals
2465	Manufacture of prepared unrecorded media
3002	Manufacture of computers and other data-processing equipment
3230	Manufacture of television and radio receivers, sound or video recording or reproducing apparatus and associated goods
3611	Manufacture of chairs and seats
3612	Manufacture of other office and shop furniture
3613	Manufacture of other kitchen furniture
3614	Manufacture of other furniture
3630	Manufacture of musical instruments
3650	Manufacture of games and toys
6420	Telecommunications
7260	Other computer-related activities

According to the WIPO classification, a first group of interdependent CIs comprises the retail and wholesale processing industry, including television, radio receivers, CDs, DVDs, cassette players, electronic game equipment and other similar equipment; computers and related equipment and musical instruments. The principal function of the interdependent industries is to facilitate the use of creative materials and products. A second group, less closely related to creative materials, called partial copyright industries, comprises processing and the retailing and wholesaling (sale and rental) of photographic and cinematographic apparatus, photocopiers, form printing equipment and paper.

The activities of these industries do not relate mainly to creative material, but they do contribute to facilitating its use, especially with respect to equipment and technical means that may also be used for other purposes.

The contribution of these industries in the use of creative material subject to copyright provisions was determined by combined quantitative and qualitative analysis, which involved working out the specific volume of activity and calculating the copyright factor in the turnover achieved by active economic participants in the national economy between 2002 and 2005, with qualitative “adjustment” estimates being also made by experts. This was paralleled by the distribution of a questionnaire to representative economic players in the selected fields, and the conduct of interviews with the managements of some of those entities. The aim was to use annual statistical and fiscal statements to adjust the quantitative indicators worked out, and thus to establish the end value of the copyright factor.⁴ The average percentage value of the copyright factor corresponding to the interdependent industries was 17 per cent in 2005, a slight decrease compared with 2002. This evolution (Table 2.3) is attributable to the highly differentiated dynamic of activities in the national economy, including those relating to copyright, against the background of the economic relaunch and the changes brought about by Romania’s accession to the EU.

⁴The same methodology was applied for assigning the copyright factor to two other groups of industries, i.e. partial and non-dedicated.

Table 2.3. Copyright Factor Calculated in Relation to Total Turnover (=1.0) for Interdependent CIs

Industry	2002	2003	2004	2005
Manufacture of paper and paperboard	0.40	0.32	0.37	0.34
Manufacture of paper and paperboard articles	0.20	0.31	0.12	0.13
Manufacture of photographic chemicals	0.45	0.49	0.49	0.50
Manufacture of prepared unrecorded media	0.75	0.82	0.89	0.89
Manufacture of computers and other data processing equipment	0.53	0.61	0.62	0.60
Manufacture of television and radio receivers, sound or video recording or reproducing apparatus and associated goods	0.63	0.65	0.69	0.70
Manufacture of chairs and seats	0.02	0.01	0.03	0.04
Manufacture of other office and shop furniture	0.10	0.12	0.14	0.15
Manufacture of other kitchen furniture	0.01	0.03	0.02	0.03
Manufacture of other furniture	0.03	0.05	0.07	0.045
Manufacture of musical instruments	0.63	0.69	0.75	0.07
Manufacture of games and toys	0.49	0.52	0.57	0.57
Telecommunications	0.23	0.24	0.26	0.14
Other computer-related activities	0.56	0.60	0.60	0.56
Total Interdependent	0.23	0.23	0.24	0.17

The average copyright factor for foreign trade was 0.43 for interdependent CIs, which were differentiated according to the categories of activities included in CANE.⁵ It should be mentioned that the statistical information for exports and imports comes from the NIS database, and is based on the customs statements for exports and imports gathered from Romania by the National Customs Authority. Exports and imports were classified according to the combined classification list, which also forms the basis for customs tariffs; the corresponding CANE rev. 1 classification data is determined on the basis of conversion tables. The value of exports and imports was calculated at the applicable FOB prices for exports and CIF prices for imports. The export balance was worked out by converting the CIF imports into FOB imports by means of a conversion coefficient of 1.0834.⁶

2.4 Partial Copyright Industries

These are activities relating to creative materials or potentially involving creation, production or processing work, exhibition, distribution or sale.

For the purposes of our study the partial industry classification list includes the 25 industries presented in Table 2.4.

⁵ A similar methodology was also used for estimating the copyright factor for the other groups, partial and non-dedicated.

⁶ See the methodological notes from the Romanian Statistics Yearbook, pp 670 – 671, NSI, Bucharest.

Table 2.4. List of Partial Industries

CANE Code	Description
1740	Manufacture of made-up textile articles, except apparel
1751	Manufacture of carpets and rugs
1754	Manufacture of other textiles n.e.c.
1760	Manufacture of knitted and crocheted fabrics
1771	Manufacture of knitted and crocheted hosiery
1810	Manufacture of leather clothes
1822	Manufacture of other outerwear
1823	Manufacture of underwear
1830	Dressing and dyeing of fur, manufacture of fur articles
1930	Manufacture of footwear
2612	Shaping and processing of flat glass
2613	Manufacture of hollow glass
2621	Manufacture of ceramic household and ornamental articles
2630	Manufacture of ceramic tiles and flags
2861	Manufacture of cutlery
3621	Striking of coins
3622	Manufacture of jewelry and related articles n.e.c.
7420	Architectural and engineering activities and related technical consultancy
7487	Other services mainly rendered to enterprises
9133	Activities of other membership organizations n.e.c.
9252	Museum activities and preservation of historical sites and buildings

The copyright factor in 2005 for this group of industries was 0.09, a slight increase compared with 2002, as the industries of the group recorded relatively slight fluctuations in value for their activity.

Table 2.5. Copyright Factor in Relation to Total Turnover (=1.0) of CI Partial Industries

Industry	2002	2003	2004	2005
Manufacture of made-up textile articles, except apparel	0.01	0.01	0.01	0.02
Manufacture of carpets and rugs	0.03	0.02	0.02	0.03
Manufacture of other textiles n.e.c.	0.02	0.02	0.02	0.02
Manufacture of knitted and crocheted fabrics	0.02	0.03	0.04	0.06
Manufacture of knitted and crocheted hosiery	0.01	0.01	0.02	0.02
Manufacture of leather clothes	0.05	0.06	0.06	0.04
Manufacture of other outerwear	0.06	0.07	0.07	0.07
Manufacture of underwear	0.03	0.03	0.03	0.04
Dressing and dyeing of fur, manufacture of articles of fur	0.02	0.02	0.03	0.03
Manufacture of footwear	0.10	0.11	0.10	0.10
Shaping and processing of flat glass	0.08	0.08	0.07	0.07
Manufacture of hollow glass	0.17	0.19	0.19	0.20
Manufacture of ceramic household and ornamental articles	0.32	0.32	0.34	0.33
Manufacture of ceramic tiles and flags	0.07	0.09	0.09	0.60
Manufacture of cutlery	0.01	0.02	0.02	0.02
Striking of coins	0.35	0.32	0.31	0.31
Manufacture of jewelry and related articles n.e.c.	0.15	0.17	0.15	0.17
Architectural and engineering activities and related technical consultancy	0.12	0.19	0.12	0.12
Other services mainly rendered to enterprises	0.04	0.05	0.07	0.07
Activities of other membership organizations n.e.c.	0.07	0.07	0.08	0.60
Museum activities and preservation of historical sites and buildings	0.27	0.28	0.18	0.19
Total Partial	0.08	0.09	0.08	0.09

If one analyzes the copyright factor for interdependent industries alongside that for the partial industries, one might observe a divergence in the average for the total group, but in our view this is a one-off occurrence, due largely to the development of relevant legislation and the “compliant” behavior of the economic players in response to new functional needs. An increase is to be expected for the impact of the interdependent industry group, with a more marked rise in the value of the indicator in comparison with the partial industries group.

The copyright factor for foreign trade, determined by a similar methodology on the basis of the turnover factor, was 0.149.

2.5 Non-Dedicated Support Industries

Non-dedicated support CIs include 36 activity groups from the CANE code, where one section is related to facilitating the communication, distribution or sale of copyright goods, which for the most part are connected with transport, wholesale and retail, telephony and the Internet (Table 2.6). These industries have more to do with the business environment and spillover effects, so only some of their activities relate to core copyright-based industries.

Table 2.6. List of Non-Dedicated Support CIs

CANE Code	Description
51	Wholesale trade and commission trade, except for motor vehicles and motorcycles
52	Retail trade, except for motor vehicles and motorcycles; repair of personal and household goods
60	Land transport; transport <i>via</i> pipelines
61	Water transport
62	Air transport
63	Supporting and auxiliary transport activities; travel agency activities
64	Post and telecommunications
7133	Rental of office machinery and equipment, including computers
7250	Maintenance and repair of office, accounting and computing machinery

The impact factor for this group of industries was around 0.01 in 2005, a slight increase compared with 2002. The ratio of the copyright factor value was 1:5 in comparison with the partial CIs, and approximately double that of the interdependent CIs.

Table 2.7. Copyright Factor in Relation to Total Turnover (=1.0) of the Non-Dedicated Industries (%)

Industry	2002	2003	2004	2005
Wholesale and commission trade, except for motor vehicles and motorcycles	0.01	0.02	0.02	0.02
Retail trade, except for motor vehicles and motorcycles; repair of personal and household goods	0.01	0.01	0.01	0.01
Land transport; transport <i>via</i> pipelines	0.02	0.02	0.02	0.02
Water transport	0.02	0.02	0.02	0.02
Air transport	0.03	0.03	0.03	0.02
Support and auxiliary transport activities; travel agency activities	0.01	0.01	0.01	0.01
Post and telecommunications	0.05	0.05	0.05	0.04
Rental of office machinery and equipment, including computers	0.01	0.01	0.01	0.01
Maintenance and repair of office, accounting and computing machinery	0.01	0.01	0.01	0.01
Total Non-Dedicated	0.01	0.01	0.01	0.01

2.6 Objectives

The major objectives of this study, to which our entire theoretical-methodological approach was subordinate, centered on measuring the total economic contribution and the contribution of components of the CIs, determined mainly by three indicators: production and value added; labor force and employment and foreign trade.

Using these basic indicators, we have attempted to determine other indicators of performance and structure of the entire CI sector, and of its costs compared with the national average.

The analysis was extended to cover the influence on the economy of CI wages, depreciation, gross profit, duties and taxes.

We also carried out inter- and intra-activity comparisons on groups of CIs (core, interdependent, partial and non-dedicated).

Our analysis relates to the period from 2002 to 2005 when, after a sharp decline caused by the cost of its transition to a market economy, the Romanian economy succeeded in showing an upward trend in macro-economic terms, recording increases in GDP and thus improving its parameters of macro-stability and market mechanisms. For certain indicators (especially the number of economic agents within CIs), statistical data from the 2002-2005 period was available.

At the same time, our research was able to assess the influence of several qualitative and quantitative factors on the size and structure of the economic contribution of CIs. Those factors were: the availability of production factors (labor and capital); volume and dynamics of demand; interference with upstream and downstream industries; the development of the business environment and State intervention.

Depending on the objective pursued, calculations for the indicators analyzed are expressed as current and/or constant prices (in 2002). The method of chain indices was also used. The deflation of the indicators analyzed was based on the consumer price index for each year.

Chapter 3

Economic Contribution of the Copyright-Based Industries

In this Chapter we shall analyze the economic contribution of CIs and their components to production, value added, employment and foreign trade in Romania for the period from 2002 to 2005, and thereby attempt to deduce some indices from the viewpoint of size, structure, dynamics and efficiency at the macroeconomic level.

3.1 General Economic Premises

In the period from 2002 to 2005, CIs were developed as part of a relatively advanced phase of transition to a market economy, characterized by the following features:

- the shift in the evolution of the economy since 2000, from negative to positive GDP growth rates, pointing to a relatively high degree of recovery of the national economy;
- substantial growth in the private sector, with the highest share in the economy, and with a major part played by the copyright industries, although the public sector is still active in this field;
- a population decrease from 21.8 to 21.6 million due to negative birth rates and emigration of the labor force;
- dominance of the service sector in both relative and absolute terms (53.4 per cent of total employment) as a result of a decline in the primary and secondary sectors, digitalization and the more rapid development of some financial and public services;
- an increase in labor productivity from 32.10 per cent to 40.90 per cent of the average EU level - as against 25 per cent in the period from 2000 to 2005;⁷
- Romania's NATO membership in 2004 and preparation for EU accession in 2007 were active factors of development, stability and security, as the estimated cost of integration was less than the benefits received;
- the harmonization of legislation between Romania and the EU, including IPRs and other international agreements and commitments, has contributed to a better understanding and enforcement of the law on the part of CIs.

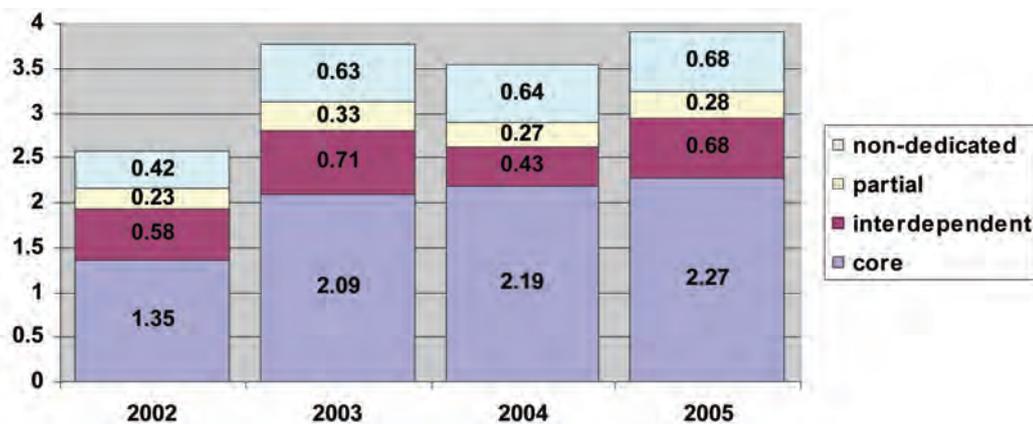
3.2 Turnover - Total Output

The economic contribution of CIs to total output for the 2002-2005 period revealed a general upward trend (Graph 3.1) with respect to their activity as a whole, but with some greater or lesser differences between CI components. In the case of non-dedicated industries there has even been a slight decrease due to higher growth rates in other sectors.

⁷ See: *The Sectoral Operational Program, Increase in Economic Competitiveness*, Government of Romania, Ministry of Finance, June 2007



Graph 3.1. CIs and Their Share in Total Output (%)

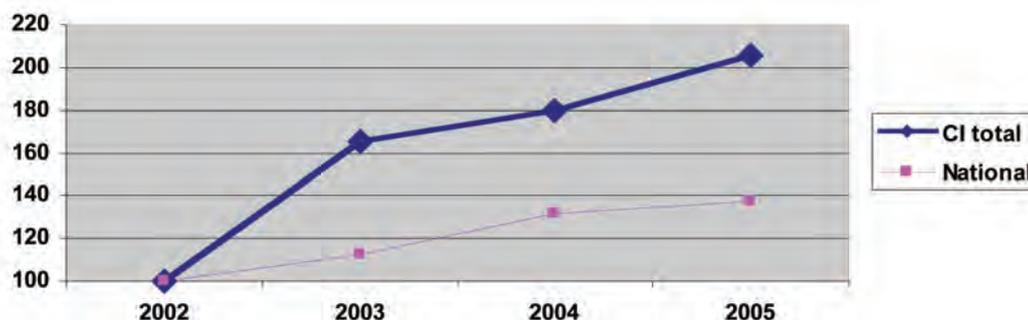


Source: Ministry of Finance

The contribution of CIs to total production increased from 2.58 per cent in 2002 to 3.89 per cent in 2005, with the highest increase recorded by the core industries, i.e. by those cultural industries that are based on artistic creativity, considered to be a growth engine for the whole sector.

The growth in the total output of CIs was higher than that of the entire national economy, the highest rates being recorded within the core, partial and interdependent industries.

Graph 3.2. Indices of CI Total Output Compared with the National Level (%)



Source: Ministry of Finance

Table 3.1. Indices of Output of Total CIs and Components in the 2002-2005 Period (2002=100)

	2003	2004	2005
Core	174.37	213.69	231.50
Interdependent	137.12	96.82	155.36
Partial	162.30	157.74	168.29
Non-dedicated	169.42	199.36	221.16
Total CIs	164.09	180.03	207.03
Total National Economy	112.47	131.56	137.70

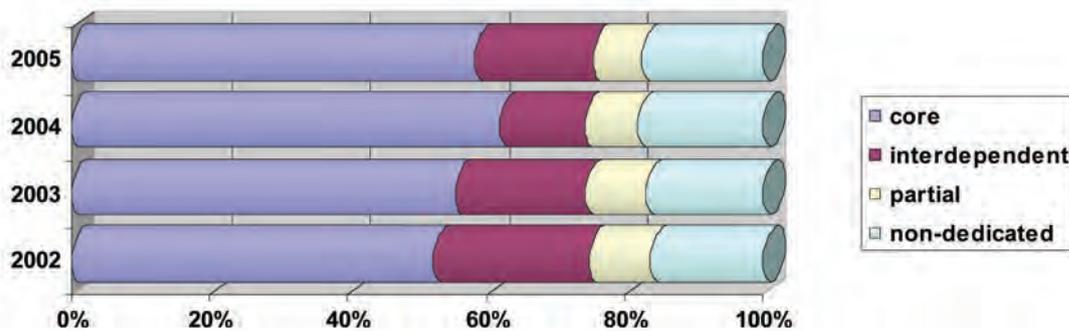
Source: Ministry of Finance

The indices with fixed bases used in the comparative analysis of the output of CIs and the evolution of their components reveal the following:

- the total output of CIs followed an upward trend from 2002 to 2005 which was higher than the national average;
- the highest dynamic was recorded by the core industries (2.3 against the average 1.3 for the national economy);
- the interdependent industries also showed a high dynamic (1.5), although that actually constituted a sharp drop.

The most significant shares, over 50 per cent of total output, were those of the core CIs followed by the interdependent and non-dedicated.

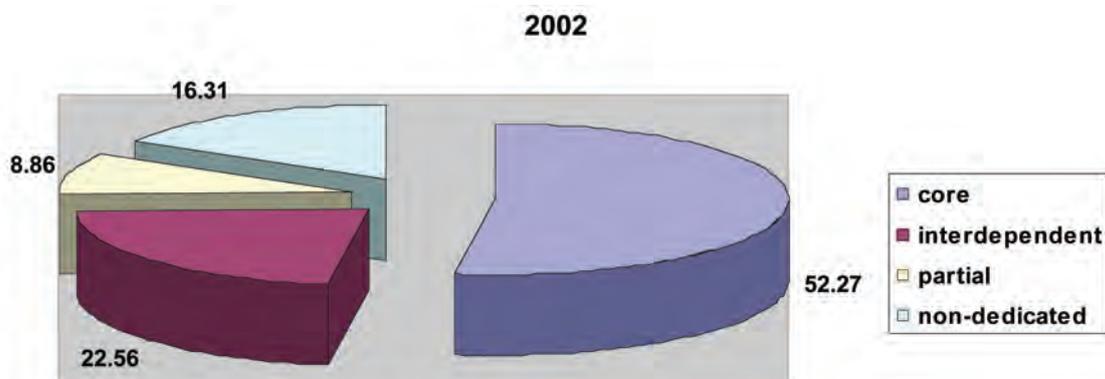
Graph 3.3. CI Structure by Components



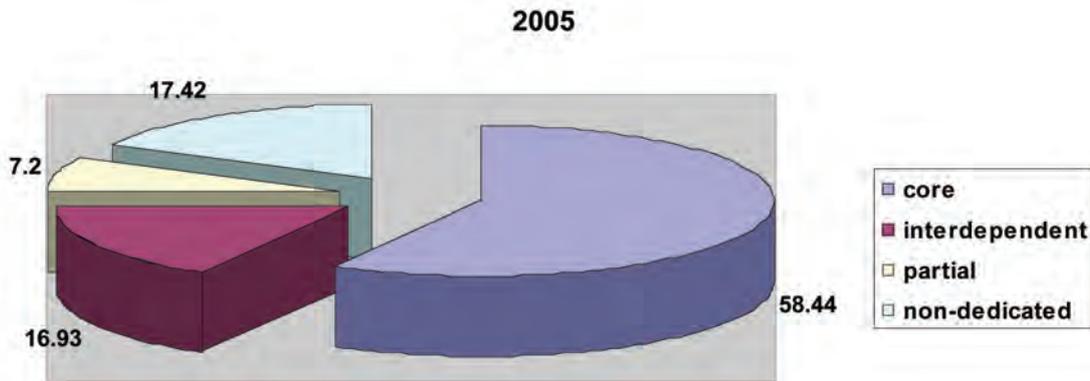
Source: Own calculations, based on data from graph 3.1

In the 2002-2005 period, the favorable state of general economic growth resulted in an increase in the core CI share in total production from 52.05 per cent to 58.24 per cent. Less favorable conditions for the domestic manufacture of paper, furniture, textiles and computers, due to competitive imports, contributed to a drop in the share of both interdependent and partial copyright industries.

Graph 3.4. Outcome Structure of CIs by Components (%)



Source: Ministry of Finance



Source: Ministry of Finance

3.3 Gross Value Added (GVA)

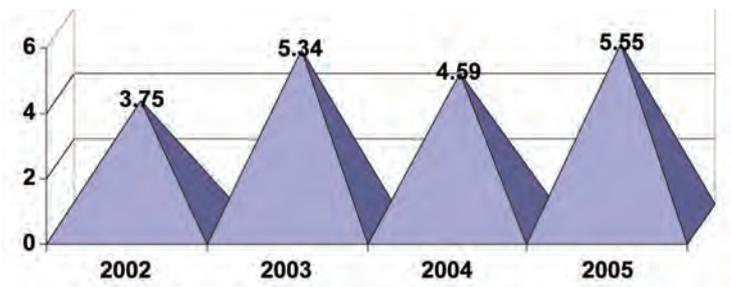
The share of of CI gross value added (GVA) in GDP

The CI contribution to GVA and GDP was estimated both for the CIs overall and for their four components (core, interdependent, partial and non-dedicated support industries) using the methodology described in the previous Chapter. The absolute values of CIs and their components are presented in the annexes, so in the following graph we show only relative values, i.e. shares in GDP.

Only the GVA was used to determine the size of GDP; we refer to this as the adjusted GVA or GDP (not including the informal economy and home consumption).

For CIs overall, adjusted GDP increased by 1.8 per cent in 2005 compared with 2002.

Graph 3.5. Evolution of CI Share in Adjusted GDP, 2002-2005 (%)



Source: Ministry of Finance

The share of value added in GDP is different in intensity and the nature of its evolution (Table 3.2).

Table 3.2. Share of CIs in GDP for the 2002-2005 Period (%)

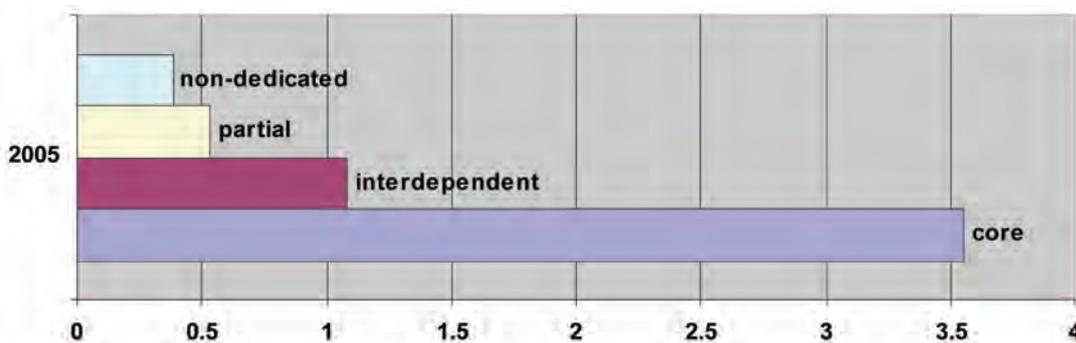
	2002	2003	2004	2005
Total CIs, of which:	3.75	5.34	4.59	5.55
Core	2.06	3.23	3.33	3.55
Interdependent	0.96	1.09	0.37	1.08
Partial	0.45	0.66	0.53	0.53
Non-Dedicated	0.28	0.36	0.36	0.39

Source: Ministry of Finance

This table shows that:

- from 2002 to 2005, the total share of CIs in GDP increased from 3.75 per cent to 5.54 per cent, which proves the importance of these industries to Romania's economic development; indeed the share is close to that of some other major industries such as construction, transport or mining, and exceeds that of hotels and restaurants;
- within the industry components of CIs, the core industries made the most significant contribution to GDP (3.54 per cent), followed by the interdependent (1.08 per cent) and the partial (0.53 per cent).

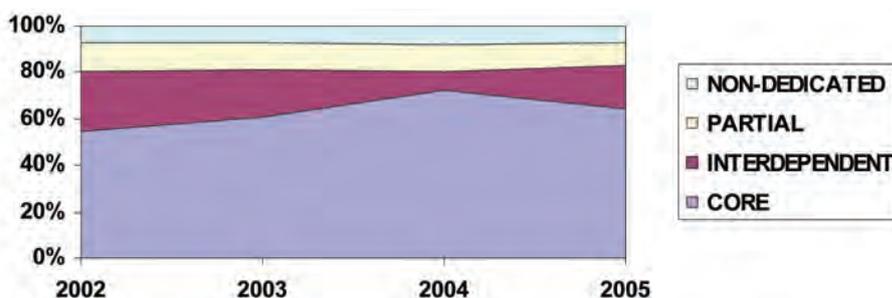
Graph 3.6. Contribution of CIs to GDP by Component Elements in 2005 (%)



Source: Ministry of Finance

Whereas the general trend in the share of CIs in total GDP was upward, variations in its size were nevertheless recorded from one year to the next, which illustrates the volatile nature of the activity, its income being highly sensitive to the influence of internal and external supply and demand factors.

Graph 3.7. Percentage Distribution of Value Added among CI Components against CI Total Value Added



Source: Calculations based on data from Table 3.2

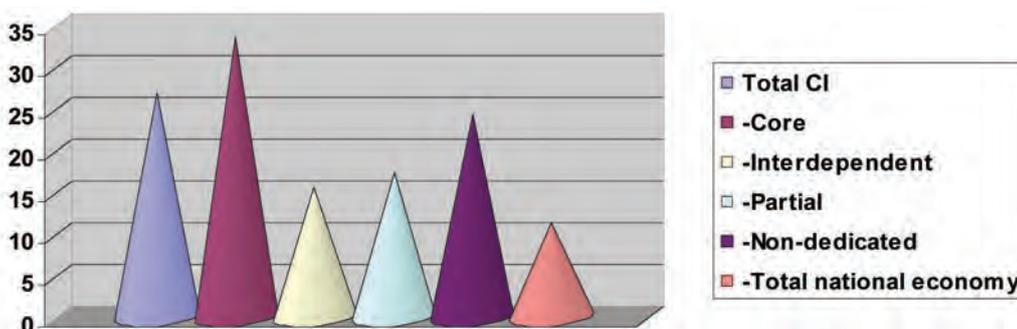
The highest share of CI GVA was achieved by the core industries (over 60 per cent from 2003 to 2005), which resulted in a powerful spillover to the other component industries (interdependent, partial and non-dedicated support) and to other sectors and activities in the national economy.

Unlike in the case of the non-core components, where the share in total value added showed greater or smaller variations from one year to the next, a general upward trend was noticeable in the share of core CIs, although this does not preclude cyclical evolution in the future. The increasing importance of copyright-protected industries is, however, directly related to the development of the knowledge-based society and information and communication technologies (ICT).

The change in gross value added

For the period analyzed CIs experienced an average yearly growth rate of more than double the GDP rate, the most significant dynamics being recorded by the core CIs and the non-dedicated industries.

Graph 3.8. Average Yearly GVA Growth Rate of CIs and Their Components, 2002-2005



Source: Own calculations

The indices with chain bases and advancement indices of value added dynamics within CIs reveal the superiority of those dynamics to the national average, especially for core and partial industries, and the fluctuations from one year to the next confirm the sensitivity of the field to various factors (economic, legal, political, cultural, institutional, environmental, etc.).

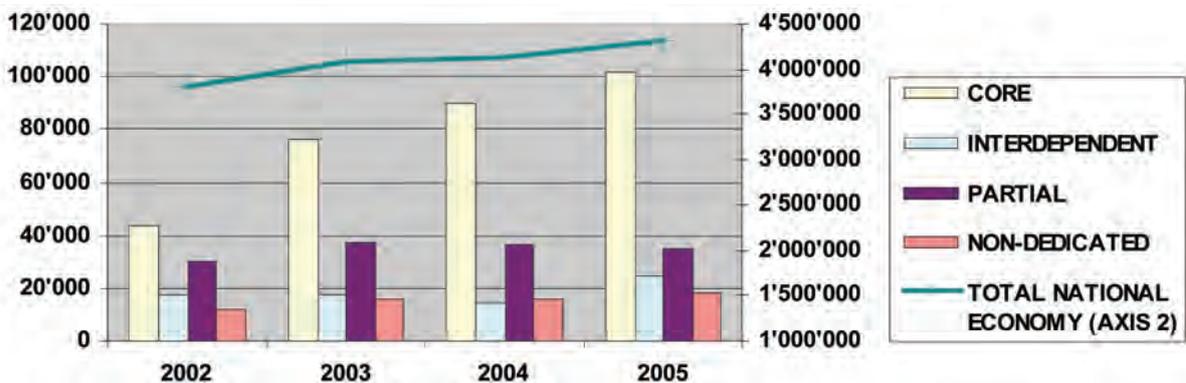
3.4 Labor Force and Employment

CIs are also an important area of activity in terms of employment levels and either full-time or part-time job creation. In our research, we used only data on the average number of employees, and they are measured in full-time equivalents. We should however mention that part-time working has followed an upward trend in copyright-based industries, and that will bring about significant changes in the employment structure in the future.

There have also been some significant changes in work content due to ICT and other technical changes associated with the powerful dynamics of job creation or job replacement.

The average level of qualifications in CIs, which is already higher than the overall national level, will show a continuing upward trend in the future owing to the incorporation of new knowledge and the skills needed to operate new technologies, as well as the application of modern management methods to creative activities and the development of an entrepreneurial culture as the backbone of career advancement.

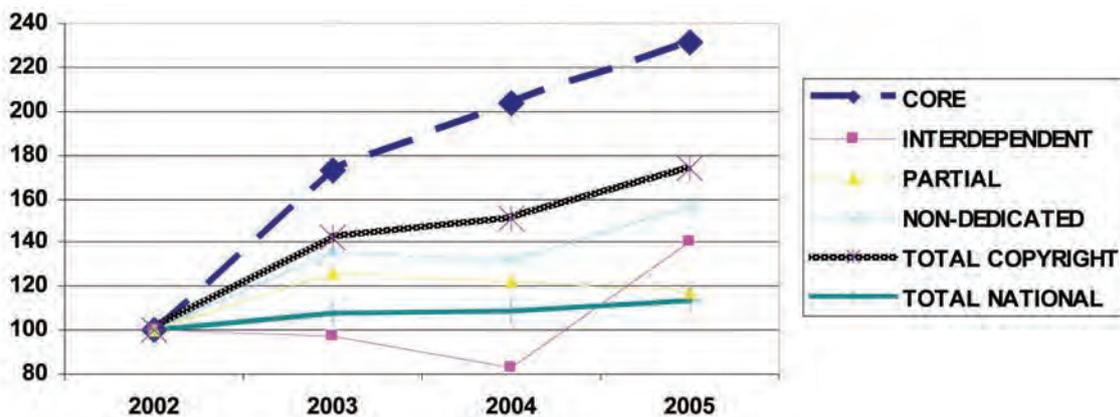
Graph 3.9. Average Number of Employees in CIs, 2002-2005



Source: Ministry of Finance

The highest number employed was in the core industries, while the lowest was in the non-dedicated support sector. There has been a significant evolution in employment dynamics in the core industries.

Graph 3.10. Growth of Average Number of Employees, 2002-2005 (2002=100)



Source: Ministry of Finance

As Graph 3.10 shows, there was an important rise in the number of employees in CIs overall (74 per cent), compared with employment growth nationally (average 13 per cent). Employment in the core industries more than doubled from 2002 to 2005 (up 131 per cent). The rapid increase in such a short time is explained by new developments in CIs that occurred during the transition period owing to economic and social changes, liberalization and the new democratic regime. The privatization of State-owned enterprises and the influx of foreign direct investment have also contributed to the development and strengthening of CIs in spite of the "stop-go" evolution of these processes, especially at the beginning of the transition to a market economy.

The opening up of the Romanian economy and society in general has also contributed to higher employment in CIs. Press freedom, an increase in the role of the civil society and the elimination of censorship have been positive job creation factors in the cultural industries. CIs have thus become a factor of job creation and unemployment reduction.

Table 3.3. Share of Employees in Total CIs at the National Level (%)

	Years			
	2002	2003	2004	2005
Total CIs, of which:	2.73	3.59	3.78	4.19
Core	1.16	1.86	2.17	2.36
Interdependent	0.47	0.42	0.35	0.58
Partial	0.79	0.92	0.89	0.82
Non-Dedicated	0.31	0.39	0.38	0.43

Source: Ministry of Finance and data from the Statistical Yearbook of Romania, NIS

The CI share in total Romanian employment reached 4.19 per cent in 2005. As a result of a sustainable increase in the average number of employees, the core industries accounted for 2.36 per cent and the non-core industries 1.83 per cent. These shares are close to those of some of the largest Romanian industries. The share of the processing industries in the total was 31.26 per cent in 2005, whereas in the national economy the construction sector accounted for 7.63 per cent, transport, storage and communications 7.0 per cent, transactions with fixed assets and other services 5.26 per cent and public administration and defense 3.66 per cent.

The number of employees in CIs increased 1.5 times as fast as the national average. The indicator was 2.6 for core industries, 1.2 for interdependent and 1.4 for non-dedicated. Throughout the 2002-2005 period the level of employment was above or below the national level, which may be due to an extensive and continuous process of adjustment of the companies to national and/or international developments and trends. Employment dynamics are also correlated with legislative developments and with the operational state of the newly created legislative and institutional framework.

Labor Productivity

An analysis of production, GVA and employment indices revealed a forward movement of result (output) indicators compared with the number of employees (input), which reflects an increase in CI labor productivity. This labor productivity calculation was made using the ratio of GVA to the average number of employees for the 2002-2005 period.

Table 3.4. Labor Productivity for Total CIs, CI Components and the National Economy

	Years							
	2002		2003		2004		2005	
	'000 €/ Employee	% compared to National Economy	'000 €/ Employee	% compared to National Economy	'000 €/ Employee	% compared to National Economy	'000. €/ Employee	% compared to National Economy
Total CIs, out of which:	7,370	138	7,842	149	7,750	121	10,458	133
Core	9,514	178	9,155	174	9,823	154	11,869	150
Interdependent	11,023	206	13,696	260	6,696	105	14,716	187
Partial	3,056	57	3,789	72	3,798	59	5,080	64
Non-Dedicated	4,872	91	4,863	92	6,119	96	7,224	92
Total National Economy	5,357	100	5,275	100	6,386	100	7,887	100

Source: Ministry of Finance

The labor productivity level for total CIs, core and interdependent was higher than the national average for the entire period, the differences in 2005 being 1.32:1, 1.51:1 and 1.86:1 respectively. This could be explained by greater capital-intensive production in these sectors compared with others. The superior labor productivity of CIs affords a significant potential for competitive and efficiency growth on both domestic and international markets, including a contribution to the process of convergence.

With respect to the dynamics of labor productivity, the highest growth is found in 2005 compared with 2002 for the partial, non-dedicated support and interdependent industries. Growth of employment in the core industries has tended to plateau, on the other hand, as the indicator has reached a relatively high level compared with the entire national economy, indicating that future growth will be relatively hard to achieve.

Labor productivity fluctuated throughout the CI sector, especially in the interdependent, partial and non-dedicated support industries, while small annual variations were recorded for the CIs, a fact which confirms our previous remark regarding a certain limit for the growth of productivity in the sector.

Table 3.5. Annual Change in GVA per Employee

	Years		
	2003	2004	2005
Total CIs, of which:	110.9	95.3	110.7
Core	100.3	103.5	99.1
Interdependent	129.5	47.2	180.2
Partial	129.2	96.7	109.7
Non-Dedicated	104.0	121.4	96.8
National Total	102.6	116.8	101.3

Source: Ministry of Finance

3.5. Total Wage Cost and Average Wage

The share of the total CI wage bill in the national total was 5.35 per cent in 2005 compared with 3.74 per cent in 2002, which is close to the share of CI GVA in GDP. The highest share of total CI wages was taken by the core industries (about 50 per cent, as shown in Table 3.6), which confirms the importance of this component in the total CI figure.

Table 3.6. Share of Total CI Wages in the National Total (%)

	Years			
	2002	2003	2004	2005
Total CIs, of which:	3.76	4.72	4.61	5.37
Core	1.83	2.88	3.10	3.50
Interdependent	1.05	0.64	0.40	0.73
Partial	0.59	0.88	0.78	0.77
Non-Dedicated	0.30	0.33	0.34	0.37

Source: Ministry of Finance

The nominal wage level in CIs, with the exception of the non-dedicated support industries, was above the national average for the entire period analyzed.

In the core and interdependent industries, wages were over 50 per cent higher in 2005 than the national average, apart from which a fall in wage differences of over 30 per cent among CI components is worth mentioning.



Table 3.7. Ratio of Monthly Gross Nominal Average CI Salary to Average Salary at National Level (%)

	Years			
	2002	2003	2004	2005
Total CIs:	138	131	122	128
Core	158	155	143	148
Interdependent	224	151	111	126
Partial	75	95	88	94
Non-Dedicated	95	85	90	86

Source: Ministry of Finance

The data on wages reveal a tendency to fluctuate, especially in the non-core industries. In the opinion of the specialists interviewed, a wage and income inequality could be seen in CIs as a whole and, to a lesser extent, in the interdependent industries, with a relatively small number of employees receiving very high salaries and the majority of the others lower ones. This could be partly explained on the one hand by the relative importance of creativity, and on the other by the specific, monopolistic nature of the competitive market in this field.

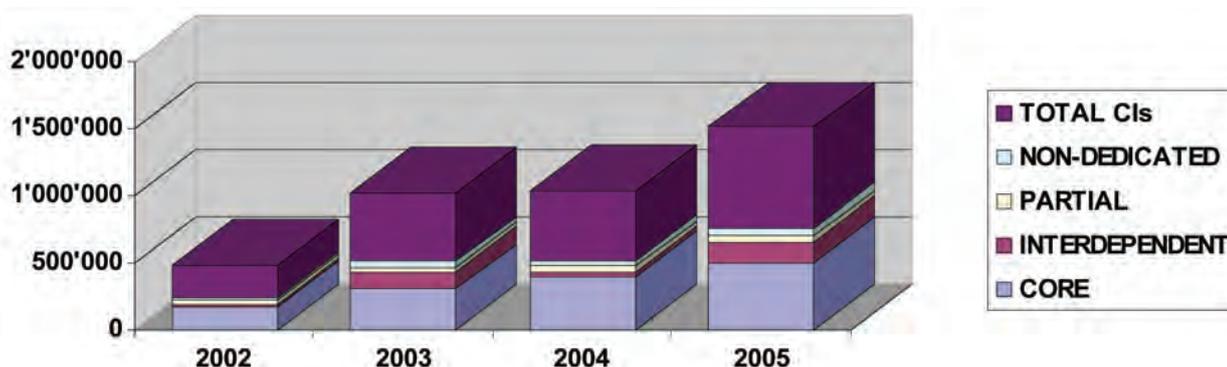
3.6 Profitability of Copyright-Based Industries

Even though CI goods share many characteristics with other sectors that have a greater or smaller time lag with respect to legal aspects and levels of piracy and counterfeiting, profitability in a market economy is crucial. We therefore consider the analysis of CI profitability useful as, to a greater or lesser extent, it influences the future development of such industries and their economic contribution. It is understood that one of the main problems of economic growth remains the allocation of profits for future investment in all fields.

The CI profitability analysis has been carried out using the gross operating profit, and the gross operating profit per employee, in relation to volume, structure and size and compared with the national average.

The core CIs make the greatest contribution to the operating profits of CIs, followed by the interdependent industries. If we take into account the fact that creative activities generate a higher GVA, it is normal that their profits will be greater than those of the other components (partial and non-dedicated). There was a significant evolution in 2003 compared with 2002.

Graph 3.11. Gross Operating Profit by CI Components, 2002-2005 ('000 euros)



Source: Ministry of Finance

According to our calculations, the share of the gross operating profits of CIs in the national total increased from 3.77 per cent to 6.63 per cent in the period analyzed. The highest increases were recorded for core industries (1.60 per cent) and interdependent industries (0.94 per cent).

Table 3.8. CI Profit Share in Total National Level (%)

	Years			
	2002	2003	2004	2005
Total CIs	3.78	6.64	5.48	6.40
Core	2.67	3.97	4.21	4.22
Interdependent	0.37	1.59	0.38	1.31
Partial	0.42	0.61	0.44	0.39
Non-Dedicated	0.32	0.48	0.44	0.48

Source: Ministry of Finance

The contribution of the component industries is close to that for GVA, turnover and employment. The gross operating profit per employee shows high and increasing values in the case of core industries. The interdependent industries experienced considerable fluctuation year on year, although their number followed a downward trend.

Compared with the national average, the operating profit per employee was obviously higher for interdependent and core industries and lower for partial and non-dedicated industries (Table 3.9).

Table 3.9. Ratio Between Profit per Employee for CIs and Profit per Employee at National Level

	Years			
	2002	2003	2004	2005
Total CIs	139	185	145	153
Core	230	213	195	179
Interdependent	79	378	108	227
Partial	54	66	50	48
Non-Dedicated	102	122	118	111

Source: Ministry of Finance

Of all the CIs, the core industries showed the highest share of operating profit (60 per cent), followed by the other component industries.

As for the evolution of the operating profit per employee, the highest growth rates were recorded for interdependent industries, while we noticed significant variations throughout the period for all component industries.

3.7 International Trade

CIs are a sector of economic, social and cultural activity strongly related to the import and export of copyright goods, or goods with a direct or indirect connection to them. In our research, the economic contribution of CIs to Romanian international trade was analyzed using export and import indicators (volume, growth rate and structure) for the 2002-2005 period. The empirical evidence was provided by the National Institute of Statistics for core, interdependent and partial industries only, while for the non-dedicated support industries the requisite information was not obtainable according to the established methodology.

Exports

From 2002 to 2005, the FOB value of exports for CIs increased from 122.7 million to 177.1 million euros (i.e. by a factor of 1.44), while the share in total exports was 0.84 per cent in 2002 and 0.80 per cent in 2005. Although the share in total exports is relatively low, it is still close to the equivalent for certain important commodities specific to Romanian exports.

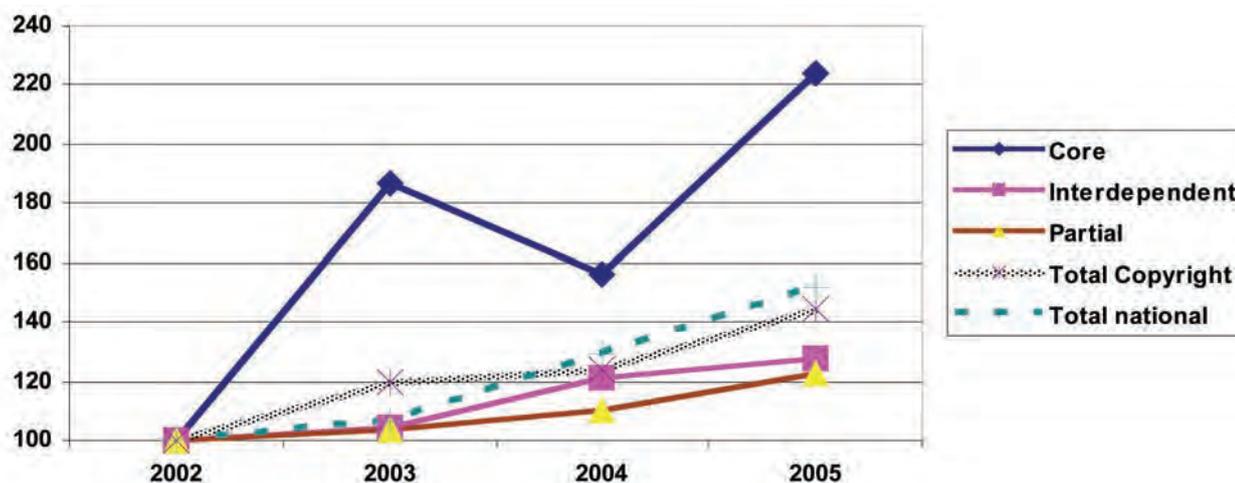
Table 3.10. CI Exports, 2002-2005 ('000'000 euros)

CI COMPONENTS	YEARS			
	2002	2003	2004	2005
Total CI Exports	122.7	147.1	152.3	177.1
Core	23.5	43.9	36.8	52.6
Interdependent	57.3	59.9	69.3	73.1
Partial	41.9	43.3	46.2	51.4
Total National Exports	14,675	15,614	18,935	22,255

Source: NIS database

In the period analyzed CIs followed an upward trend; they did however show annual fluctuations, which reflect not only variations in output due to internal factors and international circumstances, but also an inability to keep the competitiveness of Romanian exports constant. The fluctuations are also explained by the influence of the "fashion" factor, which presupposes a given creativity, adjustment and absorption capacity on the part of the Romanian economy, which in the case of CIs is evidence of the modest power of Romanian companies to impose their own brands on domestic and external markets.

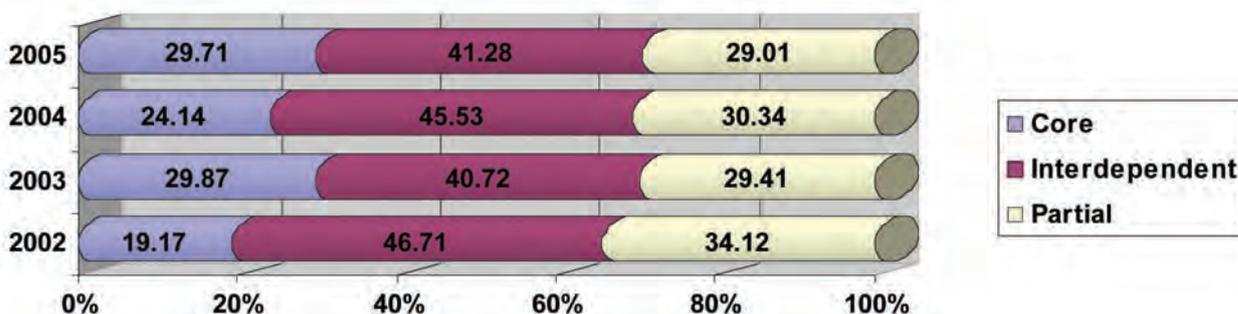
Graph 3.12. Dynamics of International Trade Compared with 2002 (=100)



Source: NIS database

The average annual growth rate of CI exports in the 2002-2005 period was 13 per cent. The core industries achieved 30.78 per cent, the interdependent industries 8.45 per cent and the partial industries 7.06 per cent. The increase in exports of the core industries substantially exceeded the national average increase in exports, which was 14.89 per cent.

Graph 3.13. Structure of Exports by CI Components, 2002-2005

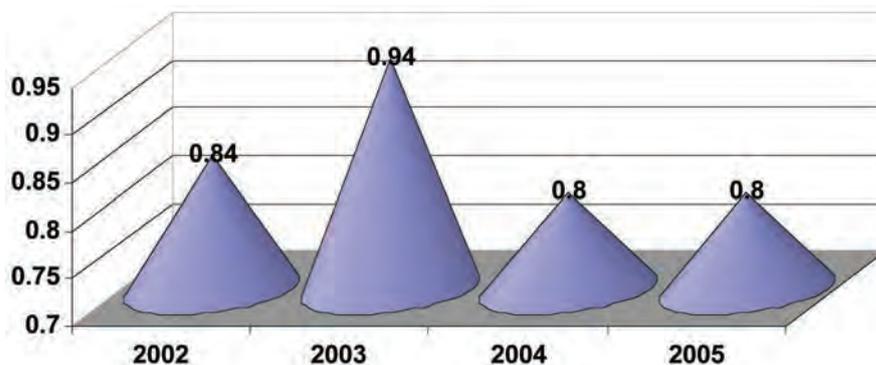


Source: NIS database

In the course of the period analyzed, an increased share in total CI exports of 10.54 per cent was noted for core industries while the share of the non-core industries decreased, revealing the core industries' ability to increase their contribution to the national export total.

The share of exports of copyright goods in total national exports ranged from 0.80 per cent to 0.90 per cent, which is a modest contribution compared with those of other, especially industrialized countries.

Graph 3.14. Share of CI Exports in Total Exports, 2002-2005 (%)



Source: NIS database

Imports

The import of copyright-protected goods, and of goods from related support industries, plays a very important part in the specific activities of CIs. The volume, dynamics and structure of these imports have been analyzed using the same static and dynamic indicators as in the case of exports.

Table 3.11. Volume and Dynamic of CI Imports ('000'000 euros)

CI Components	Years			
	2002	2003	2004	2005
Total CIs	205.9	263.9	330.5	424.9
Core	76.5	101.6	137.8	177.3
Interdependent	86.8	117.0	140.1	184.1
Partial	42.5	45.2	52.5	63.4
Total National Imports	18,881	21,201	26,281	32,568

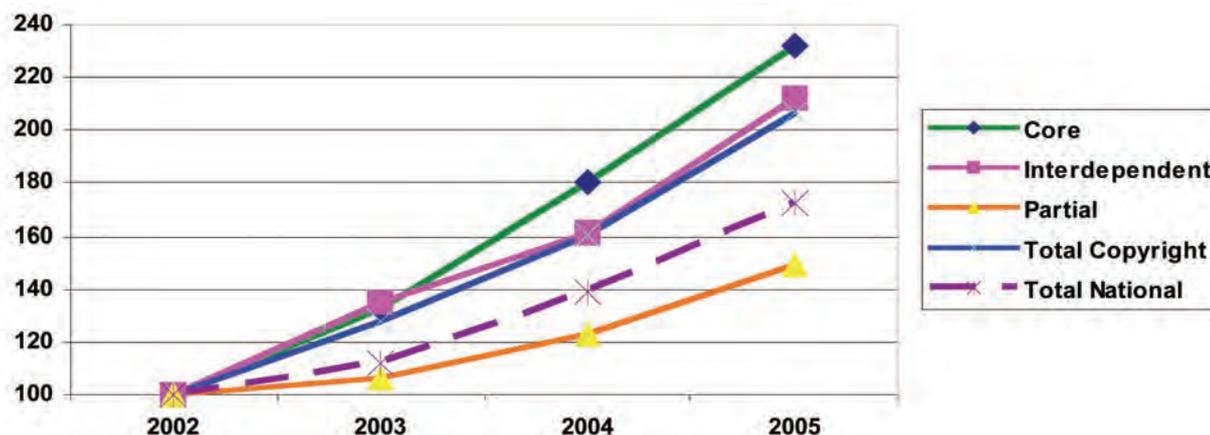
Source: NIS database

CI imports doubled in the period from 2002 to 2005. The highest increases were recorded by the core industries (over 130 per cent) and interdependent industries (over 110 per cent), compared with the national level of 70 per cent.



It is worth mentioning that CI imports showed a permanently upward tendency for all CI product categories; compared with exports, they were more dynamic and showed steady growth, which is explained by the liberalization of international trade in Romania, the elimination of the State monopoly and an increase in the economic and social contribution made by the import of cultural-creative goods.

Graph 3.15. Import Dynamics, 2002-2005 (2002=100)



Source: NIS database

Expressed in annual average growth rates, the dynamic of CI goods was as follows: total CIs 27.3 per cent, core industries 32.33 per cent, interdependent industries 28.46 per cent and partial industries 14.20 per cent. Taking into account that the annual average growth rate for total Romanian imports was 19.93 per cent, imports by CIs significantly exceeded the national figure in this respect.

As CIs were more dynamic in their imports than in their exports, the gap between the two indicators widened from 1.6 in 2002 to 2.4 in 2005, which led to a worsening of the CI trade balance deficit from 83.2 million euros to 247.7 million euros (Table 3.12). In other words CIs accounted for an increasing deficit in the Romanian current account and trade balances.

Table 3.12. CI Trade Balance ('000'000 euros)

	2002	2003	2004	2005
Core	-53,010	-57,731	-101,119	-124,719
Interdependent	-29,540	-57,171	-70,812	-111,022
Partial	-0,706	-1,936	-6,306	-12,043
Total Copyright	-83,256	-116,838	-178,237	-247,784

Source: NIS database

The share of CI imports in the total for Romania increased from 1.09 per cent in 2002 to 1.30 per cent in 2005. The highest contributors to that result were the core (0.54 per cent) and the interdependent industries (0.57 per cent).

In conclusion, it can be stated that Romania is quite heavily dependent on the import of CI goods, the volume being close to that of other major industries. In order to obtain an improvement in the trade balance, the State should, through the free market economy, promote increased exports of copyright products with a view to exceeding the level of imports. Indeed a national strategy for export promotion is now being implemented in Romania with that in mind.

Chapter 4

The core copyright industries engage in activities relating to the creation, production, processing, presentation, communication, distribution and sale of copyright products, works and material. Integral to this sector are the cultural fields, in the traditional sense, as well as those that have to do with the software industry.

In 2005 the core copyright industries were responsible for around 2.27 per cent of total output and 3.55 per cent of Romania's GDP. They also provided a total of 101,801 jobs, or 2.36 per cent of the national average, while total wages earned in this sector represented 3.50 per cent of the national total.

According to our calculations, the share of core industries in total national employment and wage value was higher than the share in total gross output and GVA.

The higher level of labor productivity compared with the national level is explained by the fact that, in general, the components of core industries need better-qualified workers, especially if we bear in mind that many are associated with information and communication technology.

4.1 Evolution of the Number of Firms and Their Profitability

For some indicators, we used statistical data available at the National Registry of Commerce, which is under the authority of the Romanian Chamber of Commerce and Industry. The data refers to the number of companies, their turnover and their profits according to the industrial classification adopted for this study. An attempt was made to carry out research over a longer time span (2000 to 2005) for the core copyright industries.

Sub-chapter 4.1 was written on the basis of data supplied by the Chamber of Commerce and Industry, and is not comparable with other parts of this study for the period concerned (2002 to 2005). It offers additional information and allows for further commentary on the evolution of the number of firms and their profitability in the sector as a whole and its components.

The evolution of the number of firms in the core industries is a relevant indicator of development potential and the capacity to generate economic interdependency (through income generation, along with increased employment and intermediate and final consumption) between them and upstream and downstream companies.

Table 4.1. Evolution of the Number of Firms in Core Industries, 2002-2005

	Years					
	2000	2001	2002	2003	2004	2005
Total Core, of which:	3,873	7,354	4,866	8,988	13,277	16,381
Book publishing	328	675	389	598	746	819
Newspaper publishing	86	124	111	159	233	288
Publishing of journals and periodicals	68	128	97	155	215	269
Printing n.e.c.	586	748	640	838	1,053	1,174
Software publishing	440	829	580	1,061	1,470	1,712
Other software consultancy and supply	319	683	443	981	1,750	2,374
Data processing	166	373	211	444	643	755
Advertising	538	1,215	777	1,703	2,713	3,511
Secretarial and translation activities	217	412	247	466	775	1,008
Motion picture and video production	59	158	97	358	555	736
Radio and television activities	143	231	172	347	582	604
Artistic and literary creation and interpretation	60	174	89	229	422	569
Other entertainment activities n.e.c.	46	98	50	109	162	211
Other recreational activities n.e.c.	167	382	215	309	440	483

Source: *www.ListaFirme.ro*

The greatest shares of core industries in the total number of firms are in software publishing, consultancy and supply, advertising and book, newspaper, periodical and other printing.

The relevance of the number of firms must be analyzed in terms of their potential, the competition criteria of a market economy and economically favorable and/or unfavorable circumstances.

The number of core copyright industries increased over 4.22 times in 2005 compared with 2002 (see Table 4.1). The highest increases were in the following industries: film production (over 12 times); artistic and literary creation and interpretation (9.5 times); distribution and consultancy in relation to other software products (7.6 times); advertising (over 6.5 times); audio production (6.2 times); preparation work for pre-printing (6.1 times); data processing (4.5 times); secretarial and translation activities (4.6 times), and radio and television activities (4.25 times).

The steady growth in the number of firms reflects excessive market demand but also strong market competition, which imposes higher standards of quality and performance.

Even though there was an increasingly upward general trend in the number of firms, we did notice the existence of some periods of decline due to unfavorable economic and political circumstances (e.g. the elimination of certain tax advantages), which led to the disappearance of some companies, especially certain SMEs, which tend to be more vulnerable. The highest proportion of the total number of core CI firms is held by SMEs, which succeed in consolidating their market position, grow and go bankrupt or are taken over by larger enterprises.

The Evolution of Profitability

Empirical evidence from the Romanian Chamber of Commerce and Industry allowed us to ascertain the profitability of companies, in a disaggregated classification, in the form of a profit-to-turnover ratio at current and constant prices (Table 4.2).

Compared with 2000, profitability decreased, with significant differences in increase or decrease in component industries.

Table 4.2. Core CI Profitability: Evolution 2000-2005 (%)

Industry	2000	2001	2002	2003	2004	2005
Book publishing	7.97	12.63	10.48	15.69	14.94	14.47
Newspaper publishing	6.47	4.99	3.17	4.62	6.11	5.82
Publishing of journals and periodicals	5.13	5.49	4.96	6.01	9.11	10.67
Publishing of sound recordings	1.73	2.16	4.30	17.31	7.62	12.45
Other publishing	5.16	9.32	9.47	10.69	11.63	14.08
Printing of newspapers	4.91	3.35	3.07	3.29	4.67	4.82
Printing n.e.c.	19.09	19.40	21.39	18.16	16.76	19.14
Bookbinding	4.10	3.51	8.62	7.57	9.44	16.57
Pre-press activities	5.08	9.26	11.26	14.13	16.70	15.88
Ancillary activities related to printing	7.59	11.77	10.55	13.56	17.33	9.91
Reproduction of sound recording	8.00	13.06	12.08	12.40	10.22	16.25
Reproduction of video recording	3.94	18.03	18.56	1.01	3.34	0.59
Manufacture of television and radio receivers, sound or video recording or reproduction apparatus and associated goods	7.19	18.62	18.71	22.33	20.47	14.79
Software publishing	13.65	17.66	18.60	17.79	16.99	15.99
Other software consultancy and supply	10.83	13.75	21.29	20.76	16.53	16.50
Data processing	15.93	16.95	19.51	26.01	11.93	16.79
Database activities	15.10	28.72	36.27	38.07	32.16	18.87
Advertising	2.98	4.30	4.36	7.67	9.63	9.86
Photographic activities	5.35	5.77	6.57	6.37	8.06	8.03
Secretarial and translation activities	7.33	15.04	12.79	24.55	16.57	24.19
Activities of professional organizations	9.54	8.86	45.02	22.81	46.71	24.24
Motion picture and video production	6.41	8.25	8.92	13.62	24.52	16.98
Motion picture and video distribution	3.22	4.86	3.45	4.76	15.42	7.18
Motion picture projection	0.02	0.20	11.50	0.01	8.60	12.50
Radio and television activities	7.27	2.76	3.50	14.07	15.24	13.44
Artistic and literary creation and interpretation	15.90	20.85	29.86	26.84	61.12	22.85
Operation of arts facilities	0.00	0.00	0.00	36.51	16.01	14.18
Fair and amusement park activities	4.03	3.77	7.56	10.49	11.72	11.31
Other entertainment activities n.e.c.	4.36	6.23	4.24	13.95	16.25	15.51
News agency activities	7.61	7.04	5.23	16.82	12.90	7.92
Library and archive activities	0.55	3.18	51.45	28.09	17.56	27.67
Other recreational activities n.e.c.	2.65	4.78	5.47	15.38	15.15	9.43
Total	8.89	9.88	11.88	13.53	14.32	13.50

Profitability has been calculated in the form of a profit-to-turnover ratio.

Source: Romanian Chamber of Commerce and Industry database

Data from Table 4.2 led to some important conclusions regarding the profitability of core CI firms:

- their average profitability of 5.83 per cent in 2005 was satisfactory compared with other industries, which showed lower or even negative profit levels;
- for the whole period, there was a downward trend in average profitability from 8.90 per cent in 2000 to 5.83 per cent in 2005 which affected most of the component industries. This is because, as the number of firms increased, competition also increased, so profitability fell owing to price cuts and higher levels of demand satisfaction;
- higher profitability levels compared with average components (5.83 per cent) were recorded in 2005 by the following industries:
 - secretarial and translation activities: 10.44 per cent against 7.33 per cent in 2002;
 - artistic and literary creation and interpretation: 9.80 per cent against 15.90 per cent;
 - printing n.e.c.: 8.26 per cent against 19.09 per cent;
 - database activities: 8.14 per cent against 15.10 per cent;

- motion picture and video production: 7.33 per cent against 6.41 per cent;
- data processing: 7.25 per cent against 15.93 per cent;
- bookbinding: 7.15 per cent against 4.10 per cent;
- other software consultancy and supply: 7.12 per cent against 10.83 per cent;
- sound recording reproduction: 7.01 per cent against 8.00 per cent;
- software publishing: 6.90 per cent against 13.65 per cent;
- pre-press activities: 6.85 per cent against 5.08 per cent;
- Other entertainment activities n.e.c: 6.69 per cent against 4.36 per cent;
- manufacture of television and radio receivers, sound or video recording or reproduction apparatus and associated goods: 6.38 per cent against 7.19 per cent;
- book publishing: 6.25 per cent against 7.97 per cent;
- operation of arts facilities: 6.12 per cent against 0 per cent;
- other publishing: 6.08 per cent against 5.16 per cent.

Several core industries improved their profitability, achieving higher levels than the national average (e.g. secretarial activities, other entertainment activities, printing n.e.c).

The steepest profitability declines were recorded by data processing (-8.68 per cent), printing n.e.c (-8.26 per cent), database activities (-6.96 per cent), software publishing (-6.75 per cent), secretarial and translation activities (-6.16 per cent), other software consultancy and supply (-3.71 per cent) and book publishing (-1.72 per cent).

Increases in profitability throughout the period were recorded for: bookbinding (+3.05 per cent), other entertainment activities n.e.c. (+2.33 per cent) and operation of arts facilities (+1.77 per cent).

The profitability of the following core industries was lower than their average in 2005:

- publishing of sound recordings: 5.38 per cent against 1.73 per cent in 2002;
- fair and amusement park activities: 4.88 per cent against 4.03 per cent;
- publishing of journals and periodicals: 4.60 per cent against 5.13 per cent;
- ancillary activities related to printing: 4.28 per cent against 7.59 per cent;
- advertising: 4.25 per cent against 2.98 per cent;
- other recreational activities n.e.c: 4.07 per cent against 2.65 per cent;
- photographic activities: 3.47 per cent against 5.95 per cent;
- motion picture and video distribution: 3.10 per cent against 3.22 per cent;
- newspaper publishing: 2.51 per cent against 6.47 per cent;
- printing of newspapers: 2.08 per cent against 4.91 per cent;
- reproduction of video recordings: 0.26 per cent against 3.94 per cent.

It is worth mentioning that, while companies involved in the production and use of software and other IT facilities are generally more profitable than the average core CIs, their profitability fell in 2005 compared with 2000, when the indicator was excessively high owing to high initial demand and large numbers of powerful quasi-monopoly positions.

As the number of core CI firms increased, their profitability decreased on account of the stronger competition, increased demand satisfaction and a more rigorous application of IP law in Romania.

Most of the core industries experienced sharp drops in profitability, although several did in fact record profit rises:

- Other recreational activities: 1.5 times
- Other entertainment activities: 1.5 times
- Fair and amusement park activities: 1.2 times
- Motion picture projection: 10 times
- Secretarial and translation activities: 1.4 times
- Advertising: 1.4 times
- Pre-press activities: 1.3 times
- Bookbinding: 1.7 times
- Other publishing: 1.2 times
- Publishing of sound recordings: 3.1 times

The following industries recorded rising profitability between 2000 and 2005 and higher profitability than the average of total core CIs in 2005: secretarial and translation activities; bookbinding; other publishing; other entertainment activities; pre-press activities.

Still on the subject of the evolution of profitability, the significant fluctuation noted for almost all component industries shows how volatile and sensitive the sector is in this respect and highlights the ability of core industries to keep the indicator high in comparison with the national average.

4.2 Structure, Volume and Evolution of Gross Value Added (GVA)

At the beginning of Chapter 4, the share of core CIs in total national gross output, GVA and employment was given, to show that it increased in the period from 2002 to 2005 and to underline the steady rise in the contribution of those industries at the micro and macroeconomic levels and their important potential for growth in the medium and long terms.

In this study, we preferred to calculate GVA using the production method (cost of personnel, depreciation, profit, taxes; fewer subsidies), as this method is the best way of avoiding double counting.

The structure of core CIs

The following industries contributed the most to the generation of core industry GVA in 2005:

- Radio and television activities: 21.2 per cent
- Photographic activities: 14.03 per cent
- Printing n.e.c.: 14.0 per cent
- Other software consultancy and supply: 13.6 per cent
- Software publishing: 13.4 per cent
- Book publishing: 4.5 per cent
- Newspaper publishing: 3.1 per cent

The core CIs cover heterogeneous cultural and creative fields characterized by activities and products protected by copyright. Among them, the greatest contributions came from software, radio and television activities, publishing and printing and photography. These components all have the common feature of requiring protection by IP laws and regulations, while their economic value depends on the extent of their dissemination and due compliance with legal provisions.

The common feature of core CIs is their vocation for interdependence, their spillover (cross-sectional) connections with other Romanian industries, to which they supply copyright services and goods protected

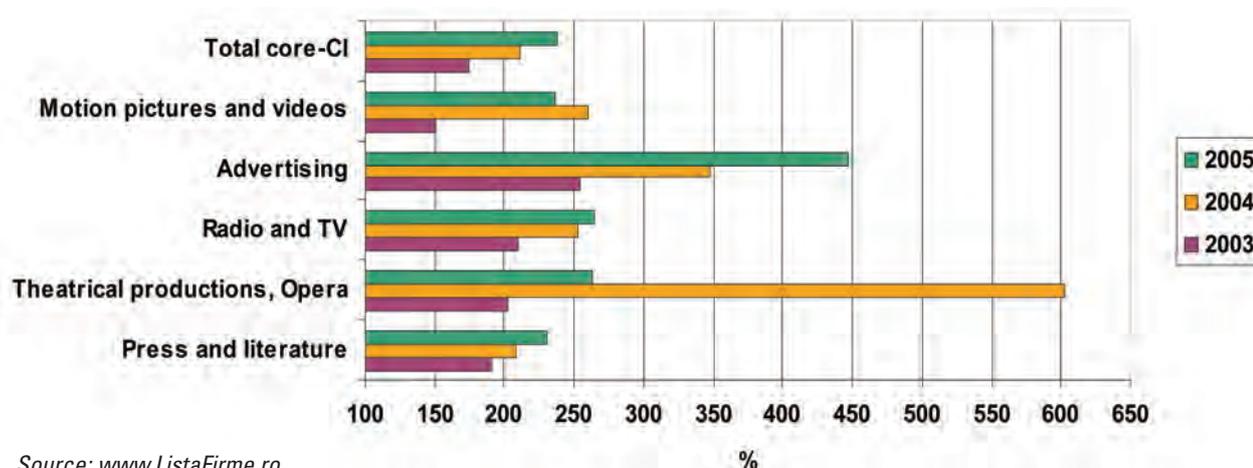
by IP laws, making intangible assets into the most important source of income and profitability for practically all socio-economic activities.

The change in GVA

The component industries of the core CIs recorded positive annual average growth rates, albeit with important fluctuations, from 2002 to 2005.

A significant increase was noted in advertising, radio and television and theater activities, particularly in 2004.

Graph 4.1. Dynamic of Core CI GVA, by Main Components (2002=100)



Source: www.ListaFirme.ro

In a more aggregated classification than that in Table 4.2, we notice that component industries with higher growth than the core CI average (33.64 per cent) were motion picture projection (347.92 per cent), publishing of journals and periodicals (168.32 per cent), newspaper publishing (112.68 per cent), publishing of sound recordings (167.58 per cent), book publishing (76.21 per cent), other publishing (74.43 per cent), advertising (64.65 per cent), artistic and literary creation and interpretation (60.93 per cent), printing n.e.c. (41.60 per cent) and radio and television (38.20 per cent).

Even the other components, however, those under the average dynamic of core CI, still recorded high values compared with the value added dynamic of the total economy, which was three times lower than that of total core activities.

GVA evolution, analyzed using chain indices, also revealed intense fluctuation, confirming the relatively unstable character of the sector, which is more sensitive to business and the influence of other specific factors.

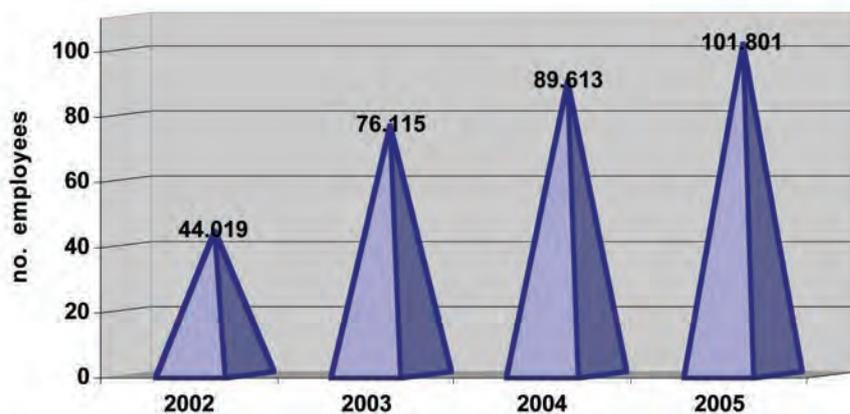
Analysis of core CI turnover in terms of structure, volume and dynamics generally shows the same characteristics as the analysis of GVA.

It will be noted that the turnover value of software and database-related activities is growing closer to that of press and literature. It is followed by advertising activities and only then by radio and television. The very low, almost insignificant contribution of the other activities, such as theater and movie production, etc. was very noticeable.

4.3 Employment in Core Copyright Industries

As indicated in the previous Chapter, core CIs made a smaller contribution to the national economy in terms of employment, namely just 2.34 per cent in 2005, with an even lower figure, 1.14 per cent, in 2002.. The change in the employment percentage does however reveal the important absorption potential of the sector. In absolute terms, the average number of employees in core copyright industries rose from 44,019 in 2002 to 101,801 in 2005, an increase of more than 100 per cent.

Graph 4.2. Change in Average Number of Employees in Core CIs



Source: www.ListaFirme.ro

In 2005, core component industries showed the highest level of employment (see Table 4.3) as follows:

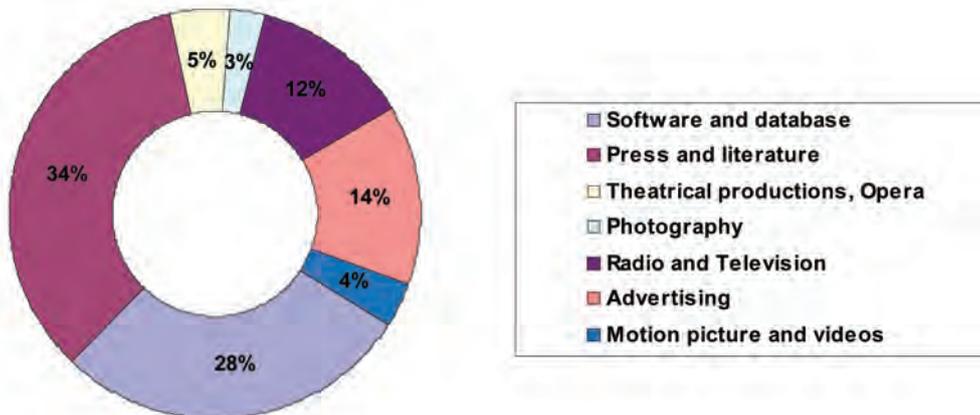
- Printing n.e.c.: 15,013 employees (14.75 per cent of total)
- Advertising: 14,617 employees (14.36 per cent)
- Radio and television activities: 12,486 employees (12.27 per cent)
- Software publishing: 12,409 employees (12.19 per cent)
- Other software consultancy and supply: 12,356 employees (12.14 per cent)
- Newspaper publishing: 5,949 employees (5.84 per cent)
- Book publishing: 4,871 employees (4.78 per cent)

The highest numbers of employees were found in printing, advertising, press and literature, software and database and radio and television.

An important feature of employees in core CIs is the creativity of the labor force, in the sense of their having the ability to create something new and combining scientific, technological, economic and artistic dimensions in their activities. Specialists⁸ therefore use the term "creative class" and propose a "creativity index" at both global and local levels. As an essential element of core CIs, creativity plays an important role in global competition and is fostered by exchanges of experience, information and skills that lead to national and international cooperation, propagation and spillover effects. Cultural creative industries account for an important share of self-employed workers and freelancers such as writers, visual artists, musicians, craft workers, designers, etc. working on a project-by-project basis, which offers more flexible opportunities in a fluctuating market .

⁸ See: Florida Richard, *The Rise of the Creative Class*, 2003; *Means of Overall Assessment of Cultural Life and Measuring the Involvement of Cultural Sector in the Information Society*, Report prepared by Robert Picard, Mikko Grönlund, Timo Toivonen, for the Finnish Ministry of Education and Culture, 2003, Finland; Hong Kong: Culture and Creativity, 2006

Graph 4.3. Structure of Labor by Components of Core CIs in 2005



Source: www.ListaFirme.ro

A large percentage of core component industries increased their levels of employment substantially between 2002 and 2005, which is explained by the initially low level of development of the industry concerned, but also by the diversification of core CI production and the fact that the intangible economy has become more and more important.

The highest growth rates were recorded in advertising, theater and opera and press and literature.

Graph 4.3. Average Number of Employees and Their Structure by Component Industries of Core CIs, 2002-2005

Industry	2002	2003	2004	2005
Book publishing	813	4.184	4.816	4.871
Newspaper publishing	796	5.440	6.633	5.949
Publishing of journals and periodicals	172	2.002	1.943	2.381
Publishing of sound recordings	33	152	227	448
Other publishing	118	329	518	524
Printing of newspapers	2.120	2.882	2.903	2.921
Printing n.e.c.	9.304	12.435	13.076	15.013
Bookbinding	440	603	502	616
Pre-press activities	234	342	452	510
Ancillary activities related to printing	343	823	880	802
Reproduction of sound recording	271	424	396	419
Reproduction of video recording	17	48	108	146
Manufacture of television and radio receivers, sound or video recordings or reproduction apparatus, and associated goods	17	84	75	86
Software publishing	10.571	7.487	9.375	12.409
Other software consultancy and supply	0	6.006	9.298	12.356
Data processing	1.362	2.184	2.848	3.115
Database activities	241	484	656	720
Advertising	3.774	8.644	12.014	14.617
Photographic activities	2.381	2.608	2.886	2.904
Secretarial and translation activities	627	0	0	0
Motion picture and video production	1.489	2.467	2.301	2.827
Motion picture and video distribution	71	1.048	288	170
Motion picture projection	29	39	681	599
Radio and television activities	6.150	12.061	12.474	12.486
Artistic and literary creation and interpretation	322	634	875	1.302
Operation of arts facilities	193	3	332	28
Fair and amusement park activities	323	291	282	332
Other entertainment activities n.e.c.	0	278	460	569
Other recreational activities n.e.c.	992	1.363	1.622	1.808
Total Core CIs	44,019	76,115	89,613	101,808
Total National	3,800,031	4,091,236	4,138,986	4,310,742
Core/National (%)	1.14	1.84	2.15	2.34

Source: Ministry of Finance

4.4 Total and Average Wage

In 2005, the total value of wages earned by employees in the core CIs was 3.49 per cent of that of wages in the national economy, compared with 1.81 per cent in 2002. The figure showed an upward trend throughout the period, which was found to be the result of both a more rapid increase in the number of employees and the growth of wages especially for highly-qualified personnel in the creative industries.

Five component core industries, namely software publishing, other software consultancy and supply, advertising and radio and television activities, contribute 77 per cent of the total wage value of core CIs, which reflects an uneven distribution of wages among those industries. Generally, in those auxiliary activities, employees are more highly skilled and better paid. The proportion of educated workers with at least a university degree, especially in the branches relating to the arts, is significant and increasing, in the opinion of specialists. Those workers are a valuable intangible asset for firms which create and profitably use new high technology in a competitive, globalized context. However, only a small proportion of core-industry employees will be successful in earning a living from creation, innovation and art.

We did not have reliable statistical data and information concerning the characteristics of the core labor force with respect to job stability (permanent and temporary workers, workers with or without second jobs, gender, age, regional peculiarities, etc.). However, our discussions and interviews with managers and specialists in core firms revealed that it is typical for many employees to have more than one job, especially in the field of art and the performing arts, where full-time contracts and permanent occupations are unusual, with workers being hired under part-time contracts or for a limited time.

The average monthly wage in core CIs in 2005 was 307 euros a month, 1.5 times higher than the national average. In 2002 to 2005 there was a slight closing of the gap between the monthly wages paid in some core copyright industries and the national average. This is explained by the faster growth of the national average wage in comparison with those in its branches.

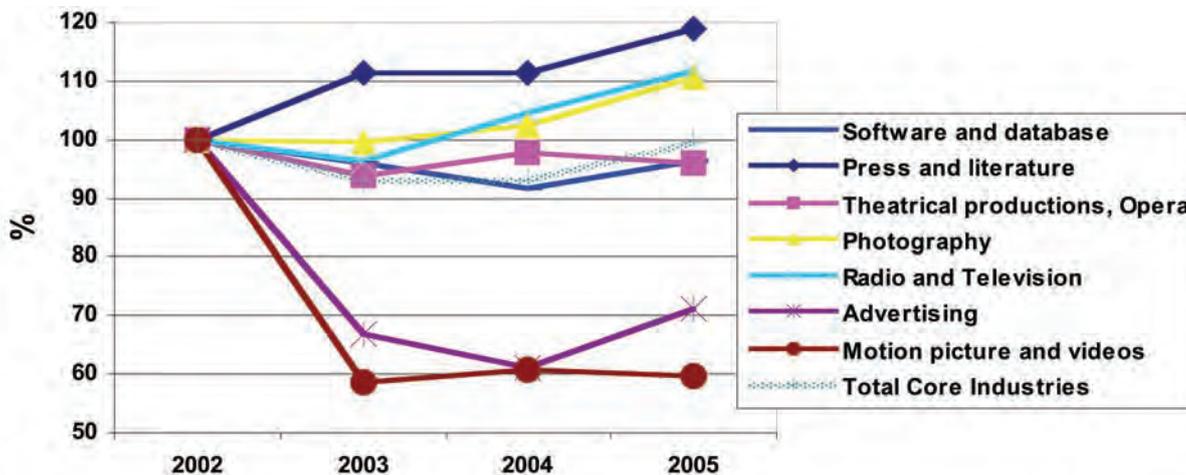
The core industries that showed the highest average monthly wage in 2005 were radio and television activities (551 euros), software publishing (470 euros), newspaper publishing (335 euros), publishing of journals and periodicals (332 euros) and software consultancy and supply (408 euros). All these cultural-creative activities were performed by university-educated people, who are badly needed in the Romanian labor market, where demand exceeds supply.

The lowest monthly wages were recorded in 2005 for six component industries, operation of art facilities, other entertainment activities, bookbinding, fair and amusement park activities, artistic and literary creation and interpretation and other recreational activities n.e.c.

Wages in those core industry activities were lower either because a high level of skills is not required or because they are classified as "low" in terms of creativity or innovation.

The real average monthly salary was constant from 2002 to 2005 for core CIs as a whole, with some fluctuation in a number of component industries (Graph 4.4).

Graph 4.4. Change in Real Salary for Several Components and Total Core CIs (2002=100)



Source: www.ListaFirme.ro

4.5 Gross Value Added Economic Components

Core industries are characterized by the specific structural features of the value added (i.e. wages, depreciation, gross profit and taxes) compared with the structure of the national GVA. Those features can serve as benchmarks for decision-making strategies and the substantiation of core industry action plans. By comparing the value added structures (personal expenses, depreciation, gross profit and taxes) of core industries with those at the national level (Table 4.4), we find the following:

- wages contribute the most; for core CIs the share is smaller than that of the national economy;
- the gross profit share in the value added of core industries is greater than in the national economy, which testifies to the relatively high profitability of the industry and also its attractiveness to investors;
- while the share of wages shows a slight downward tendency, the gross profit share has tended to move upwards, from 40.76 per cent in 2002 to 46.31 per cent in 2004;

Table 4.4. Core GVA Compared with National GVA (%) (Total GVA = 100%)

Value added Components	Years							
	2002		2003		2004		2005	
	Core	National economy						
Personal expenses	41.99	49.12	39.58	45.50	37.34	41.09	40.49	42.00
Depreciation	12.88	14.18	13.27	14.36	12.67	15.96	14.68	16.29
Gross profit	40.76	26.39	43.04	31.09	46.31	35.44	40.68	33.70
Taxes	4.36	10.30	4.12	9.05	3.68	7.51	4.16	8.01

Source: Ministry of Finance

- the depreciation and share of tax components of core CI GVA showed a slight upward trend;
- in comparison with the national level, the depreciation and share of tax components of core industry value added were small, because some benefited from tax reductions (i.e. software and database) or had relatively few fixed assets.

Analysis of the personnel costs and profit share elements of gross value added for the principal components of six core industries reveals their individual approaches to wage policy and their contribution to the State budget. It also shows their development potential, in that part of their gross profits are reinvested. We mention the high wages in the software publishing industry because of the good qualifications and the creativity of its workforce.

The lowest wage component in total value added in 2005 was in advertising (27.96 per cent) and printing n.e.c. (33.22 per cent).

In the same year, the greatest share of gross profit in value added was in the book publishing industry (57.23 per cent) and printing n.e.c. (52.70 per cent).

The contribution of the 29 core CIs in each category of value added economic variables from 2002 to 2005 revealed that the following industries had the greatest shares in the structure of GVA (personal expenses, depreciation, gross profit, taxes): radio and television (21.32 per cent of the total value added of the core industries in 2005); advertising (14.09 per cent); printing n.e.c. (14.08 per cent); software publishing (13.50 per cent); other software consultancy and supply (13.64 per cent).

Software, programming and consultancy industries based on information and communication technologies (ICT) are the activities that make the greatest contribution to the total value added of the core CI sector (27.14 per cent). Experts argue that ICT has revolutionized the economy and society as a whole as well as CIs with respect to the production and dissemination of this subject matter and the protection of intellectual property.

4.6 Productivity and Profitability of Core Copyright Industries

Labor productivity

As a developing country, Romania is interested in catching up on labor productivity, which is an important indicator of the national economy's level of competition.

A labor productivity analysis is an opportunity to see how the core CIs can contribute to the strategic goal of narrowing the gaps between Romania and more developed economies.

In spite of certain statistical difficulties faced in carrying out the study, we calculated the annual amount of value added to one employee as the labor productivity indicator in core industries, in order to see what activities are more or less productive in a comparison between CIs and the national level. This indicator has to be calculated with the "return on investment" indicator in order to gain a more comprehensive idea of the efficiency of the main production factors in the industries concerned. Unfortunately the data on investment are missing, so the only indicator used was labor productivity.

In the core CIs, labor productivity was greater than in the national economy, and it recorded a higher rate of growth.

Our study of the evolution of labor productivity in the core industries reveals the following:

- productivity in the core CI sector was 51.07 per cent above the national average;
- the productivity gap between core CIs and the national average was reduced from 70.56 per cent to 51.07 per cent, which denotes a convergence of productivity levels between them and other Romanian industries.

In 2005, industries with a higher level of labor productivity compared with the average for core CIs (11,917 euros GVA per employee) were the following:

- Radio and television: 1.72 times;
- Other software consultancy and supply: 1.11 times;
- Software publishing: 1.10 times;
- Printing of newspapers: 1.07 times;
- Manufacture of television and radio receivers, sound or video recordings or reproduction apparatus, and associated goods: 1.05 times.

The highest levels of GVA per employee were recorded in the radio, television and software industries and also in the database sector, which sometimes provided higher returns on investment in creativity and copyright.

Investment in core CIs (especially software, printing, etc.) generated more wealth than investment in other, non-core industries (equipment or paper manufacturing).

In 2005, compared with 2002, there was a noticeable decline in labor productivity in the following industries: operation of arts facilities; reproduction of video recordings; manufacture of television and radio receivers; sound or video recording or reproduction apparatus and associated goods; printing of newspapers; database activities; book publishing.

Profitability

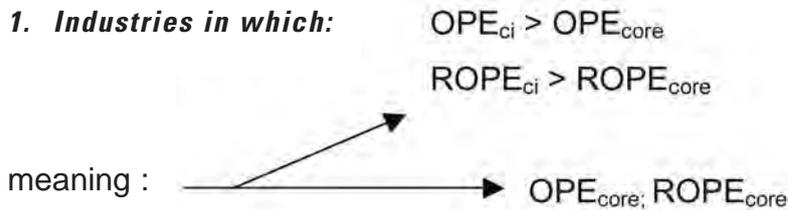
The profitability of the core industries was measured as a profit-to-employee ratio, which in our opinion is a relevant indicator of the development capacity of an industry.

The profitability analysis of the core CI sector shows that the average operational profit per employee at the national level was 2,735 euros in 2005, while in the core CIs the figure was 4,890 euros; this confirms that the core industries are a dynamic and complex economic sector characterized by relatively high profitability, which is one of the upward-driving forces in economic development.

There are wide differences among the core component industries regarding the value of the operational profit per employee indicator and its evolution in time.

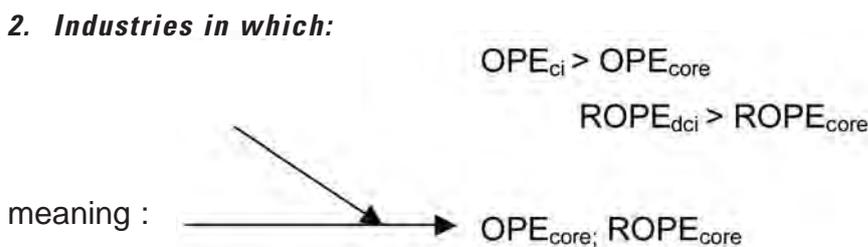
Our analysis of the core CIs with regard to the size and evolution of their operational profit per employee, both overall and at component industry level, led us to an interesting and useful classification of the core industries which could be helpful for better decision-making and policymaking in the copyright industries. This classification aims to establish a typology of core industry components and is based on two economic criteria: the level of profitability indicators for the core industry and its components on the one hand and on the other the dynamics (growth rate) of profitability for the core industry and its components over the period from 2002 to 2005.

By correlating the size indicators with the dynamic indicators of operational profit per employee, both for all core CIs and for their component industries, we can distinguish the following category of core industries:



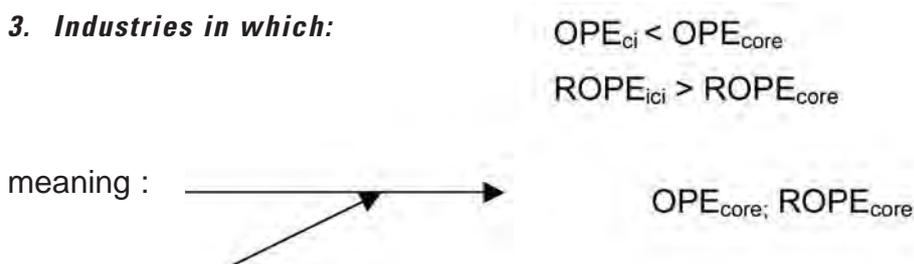
Industries that are highly profitable are showing an upward trend, because both the size and rate of the profit per employee is overtaking the core level average. In our research those categories included book publishing and artistic and literary creation and interpretation.

The strategies adopted for these core industries should aim to increase further or maintain the relative advantage of investing in creativity and dissemination of knowledge and art.



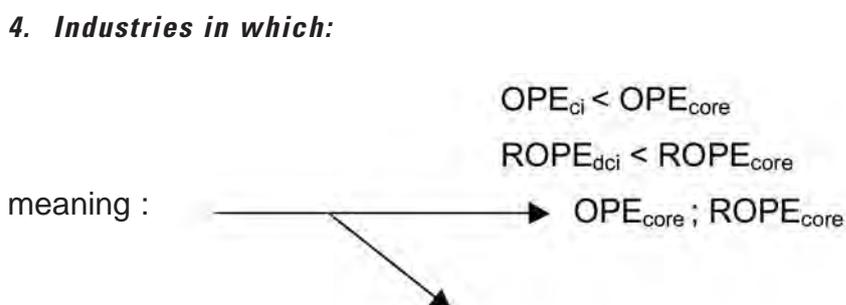
Highly profitable industries, albeit in decline, are printing of newspapers, manufacture of television and radio receivers and other software consultancy and supply.

The policy strategy goal for these industries is to stop the decline and restart growth.



Low-efficiency industries represented by bookbinding; radio and television activities, other entertainment activities n.e.c and other recreational activities n.e.c.

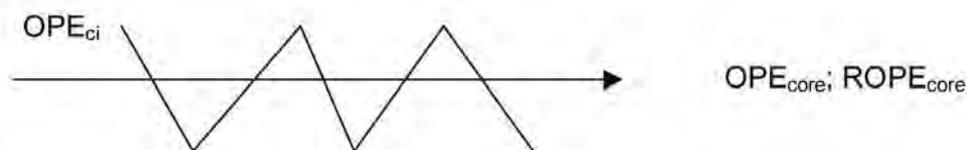
These industries need to focus their future efforts on increasing their growth rate in order to close the gap and surpass the average profitability level of the core industry.



Low-profitability industries that are in decline are newspaper publishing, other publishing, data processing and photographic activities.

Any increase in the profitability of these activities depends to a great extent on demand and also technological change.

5. Industries with a fluctuating evolution of OPE_{ci} and $ROPE_{ci}$ compared with OPE_{core} and $ROPE_{core}$, meaning:



The industries that show efficiency variations in the core CI sector as a whole are publishing of journals and periodicals, publishing of sound recordings, pre-press activities, software publishing, database activities, motion picture and video distribution, artistic and literary creation and interpretation and operation of arts facilities.

Those industries are the main contributors to the average level of profitability of the entire core industry.

6. Industries making a sensitive profitability “leap” were printing n.e.c, advertising and motion picture and video production.

7. Profitable industries in decline are the reproduction of sound recordings on the one hand and of video recordings on the other; their further development is closely tied up with technological improvements. In our view, each core category from the proposed typology requires specific strategic approaches, policies and action programs if it is to retain or improve its economic, financial and socio-cultural performance.

4.7 Contribution of Core Copyright Industries to International Trade

The contribution of the core industries to Romanian exports and imports is a particular economic issue: it has to do with the necessity of export promotion and also with the goal of maintaining the balance of payments and the current account deficit at sustainable levels. For their part CI imports are a prevailing creative and disseminating factor impacting on both cultural or social-educational values and the latest scientific knowledge. Globalization, along with the growing international interdependence of countries in economic, scientific and environmental terms, represents a boost to foreign trade for copyright works and related activities.

Exports

The core CIs recorded export growth ranging from 23.5 million euros to 55.6 million euros between 2000 and 2005 (Table 4.9). This rate might seem very dynamic, but the total volume of exports remains relatively modest if one considers the size and potential of Romania.

The share of core CIs in the total national exports grew from 0.16 per cent in 2002 to 0.24 per cent in 2005, and yet the core CI export share is very small compared with other countries, as are exports per capita. For Romania the “convergence” process in this area is a further challenge given the average level of exports in the 27-country EU (EU-27), which is much higher than in Romania.

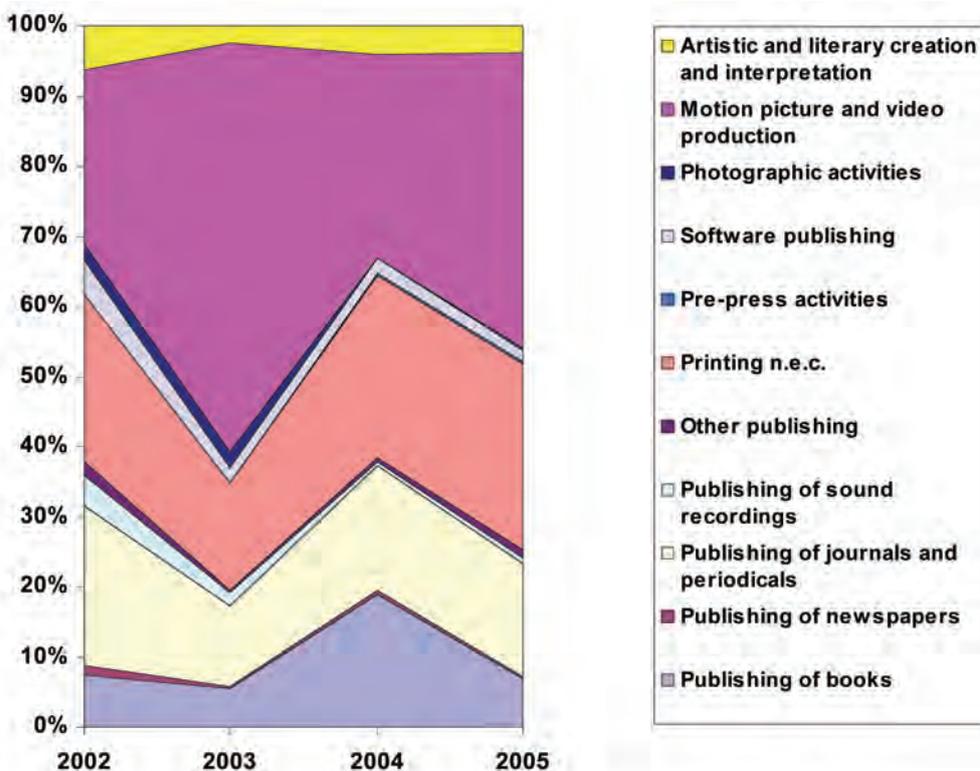
The highest export shares among core CIs in 2005 were in motion picture and video production (42.23 per cent of total core CI exports in 2005), other publishing (26.67 per cent), publishing of journals and periodicals (16.08 per cent) and book publishing (6.74 per cent).

Table 4.5. Volume Value of Core CI Industry Exports, 2002-2005 (in euros)

Industry	2002	2003	2004	2005
Book publishing	1,768,984	2,385,197	6,993,637	3,548,524
Newspaper publishing	315,481	130,834	143,919	171,896
Publishing of journals and periodicals	5,343,419	5,110,677	6,516,712	8,463,616
Publishing of sound recordings	1,001,075	746,185	205,125	539,993
Other publishing	469,957	203,257	200,129	515,106
Printing n.e.c.	5,573,600	6,666,499	9,586,023	14,038,060
Pre-press activities	54,643	39,242	105,533	118,108
Software publishing	1,156,589	1,005,238	785,112	831,342
Photographic activities	521,863	957,064	69,226	117,092
Motion picture and video production	5,842,044	25,597,145	10,678,822	22,229,281
Artistic and literary creation and interpretation	1,480,532	1,097,024	1,484,224	2,059,964
Total	23,528,187	43,938,362	36,768,462	52,632,982
Core Share in Total Exports (%)	0.16	0.28	0.19	0.24

Source: NIS database

Graph 4.5. Export Structure of Core CIs, 2002-2005 (%)



Source: NIS database

The core industries with the most dynamic exports during the period analyzed were motion picture and video production (a growth rate of 3.8), printing n.e.c. (2.5) pre-press activities (2.2) and publishing of journals and periodicals (1.6).

The level of exports during the period analyzed decreased by 20 per cent for photographic activities, by more than 50 per cent for newspaper publishing and publishing of sound recordings and by more than 33 per cent in software publishing, which is symptomatic of the weak external competitiveness of these industries.

In each core CI activity, strong export variations were noticeable for copyright goods and services from one year to the next owing to a multitude of internal and external factors and also their only moderate competitiveness.

Imports

Core CI imports grew faster than exports from 2002 to 2005, reaching 117.3 million euros in 2005, compared with 76.5 million euros in 2002 (a growth rate of more than 2.3).

Table 4.6. Value Volume of Core CI Imports, 2002-2005 (in euros)

Industry	2002	2003	2004	2005
Book publishing	18,844,470	16,776,475	20,982,073	21,713,682
Newspaper publishing	233,671	427,349	314,810	27,318
Publishing of journals and periodicals	4,723,058	4,774,906	5,129,463	5,445,879
Publishing of sound recordings	2,639,291	2,178,087	2,995,743	2,469,767
Other publishing	5,337,302	5,626,326	7,043,793	7,142,923
Printing n.e.c.	32,657,354	35,453,228	44,338,502	60,038,217
Pre-press activities	2,419,528	2,208,613	2,533,542	2,933,900
Software publishing	1,146,016	3,213,032	5,345,820	6,576,580
Photographic activities	200,059	393,733	579,251	849,727
Motion picture and video production	7,991,294	30,270,791	48,076,831	69,549,638
Artistic and literary creation and interpretation	345,727	346,710	547,569	604,281
Total	76,537,770	101,669,250	137,887,397	177,351,912
Core Share in Total Imports (%)	0.41	0.48	0.52	0.54

Source: NIS database

The core industries that made a higher contribution to the total volume of core CI imports were motion picture and video production, with an increased share in total imports from 10.44 per cent in 2002 to 39.22 per cent in 2005, printing n.e.c, despite a decrease from 42.67 per cent to 33.85 per cent, software publishing, with an increase from 1.50 per cent to 3.71 per cent, and book publishing, with a decrease from 24.62 per cent to 12.24 per cent.

Trade Balance of Copyright-Based Goods

As a result of higher imports over exports, core CIs recorded a growing annual trade balance deficit (Table 4.7), thereby adding to the current account deficit and the growth of external debt in both the medium and the long term.

Table 4.7. International Trade Balance for Core Copyright ('000'000 euros)

Industry	2002	2003	2004	2005
Book publishing	-17.08	-14.39	-13.99	-18.17
Newspaper publishing	0.08	-0.30	-0.17	0.14
Publishing of journals and periodicals	0.62	0.34	1.39	3.02
Publishing of sound recordings	-1.64	-1.43	-2.79	-1.93
Other publishing	-4.87	-5.42	-6.84	-6.63
Printing n.e.c.	-27.08	-28.79	-34.75	-46.00
Pre-press activities	-2.36	-2.17	-2.43	-2.82
Software publishing	0.01	-2.21	-4.56	-5.75
Photographic activities	0.32	0.56	-0.51	-0.73
Motion picture and video production	-2.15	-4.67	-37.40	-47.32
Artistic and literary creation and interpretation	1.13	0.75	0.94	1.46
Total	-53.01	-57.73	-101.12	-124.72

Source: NIS database

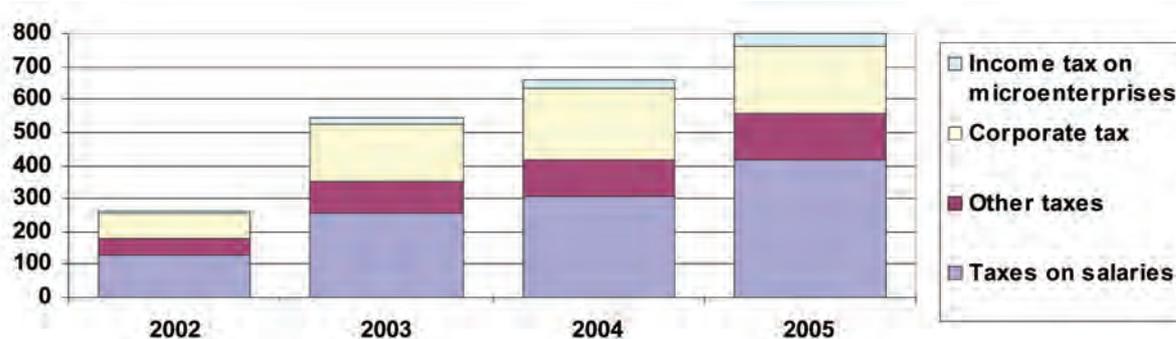
The core industries that most aggravated the trade balance deficit were motion picture and video production (37.9 per cent in 2005), printing n.e.c. (36.9 per cent) and book publishing (14.6 per cent). The only core industries that recorded a minimal trade surplus were publishing of journals and periodicals (3.02 million euros), artistic and literary creation and interpretation (1.46 million) and newspaper publishing (0.14 million).

Romania has been a net importer of copyright goods, especially as a result of EU accession and the growing influence of information and communication technology, which makes for greater national participation in the globalization of the cultural and artistic markets.

4.8 Tax Contributions of Core Copyright Industries

Core industries also contribute to Romanian economic and social development through taxes, which constitute State income.

Graph 4.6. Taxes Paid by Core CI Companies, 2002-2005



Source: Ministry of Finance

From 2002 to 2005, the contribution of core CIs to the State budget grew from 1.5 per cent to 2.82 per cent. The most important industries among the total core CIs in this respect in 2005 were radio and television activities (25.70 per cent of total), software publishing (13.52 per cent), printing n.e.c. (13.32 per cent), other software consultancy and supply (12.76 per cent) and advertising (12.72 per cent).

Taxes for total core industries increased 2.15 times compared with a growth rate of 1.14 times at the national level. The highest average annual rates of tax growth were recorded for artistic and literary creation and interpretation, radio and television and the data processing industry.

The tax structure in 2005 showed that taxes on wages and corporation tax took the greatest amount for most of the component industries, with averages of 51.82 per cent and 25.41 per cent respectively. Analysis of the tax structure for total core CIs shows that there were no significant changes throughout the period from 2002 to 2005.

Chapter 5 Economic Contribution of the Non-Core Copyright Industries

5.1. Economic Contribution of the Interdependent Copyright Industries

According to WIPO, the interdependent copyright industries (ICIs) are those sectors and activities engaged in the production, manufacture and sale of equipment to facilitate, wholly or primarily, the creation and production or use of works and other protected subject matter (WIPO Guide, p. 33).

In the case of Romania, these industries were identified through cooperation with specialists from WIPO in Geneva, and an estimate of the share of their economic contribution ("the copyright factor") was made using several information sources, such as:

- data from questionnaires sent to managers of around 100 representative companies in this field;
- specialized literature from other countries that have carried out similar studies in which they dealt with the matter of the copyright factor (Hungary, Singapore, the United States and others.);
- interviews with specialists from various public and private institutions involved in the copyright sector.

The interdependent industries selected for this study are presented in the methodology; they include the manufacture of television receivers, radios, and DVD players, the manufacture of electronic equipment and computers, musical instruments and photographic material and the manufacture of photocopying and other reprographic machines.

Usually ICIs are divided into two main groups, core interdependent and partly interdependent, according to the degree and nature of their complementarity and interaction (cross-sectional correlation) with the core copyright industries.

Core interdependent copyright industries are concerned with television and radio receivers, VCRs, cassette, CD and DVD players, electronic game consoles and other similar equipment; computers and peripherals and musical instruments.

The components of this group are essentially support industries for copyright goods and services and so depend on the existence of copyright works.

Partial interdependent copyright industries relate to paper, photographic and cinematographic instruments, photocopiers and blank recording material.

They are less dependent on core industries to facilitate their activities; indeed those activities are not primarily connected with core industries, as most of them relate to the consumer durables sector. Each ICI component was analyzed, using differentiated copyright factors, in relation to the main indicators for core industries.

5.1.1 Gross Value Added

The calculated GVA of ICIs reflects their share in direct relation to the operation of CIs, and not to the overall activities of the industries concerned.

In the period analyzed, we noticed a relatively constant proportion of GVA in the total nationally adjusted GDP (0.96 per cent - 1.08 per cent), with the exception of 2004, when the share decreased by almost 67 per cent on account of the weak performance of SMEs, which form the major part of the interdependent copyright industries. A number of tax advantages available to those enterprises in previous years were suspended in 2004, which was also an electoral year: this had a slight adverse effect on some CI areas. Compared with the share of core CIs in adjusted GDP, the ICI share is very small. The component industries that made the greatest economic contribution to the total value added of ICIs were telecommunications, manufacture of computers and other information-processing equipment, other computer-related activities, manufacture of radio and television receivers and sound or video recording or reproducing apparatus and associated goods.

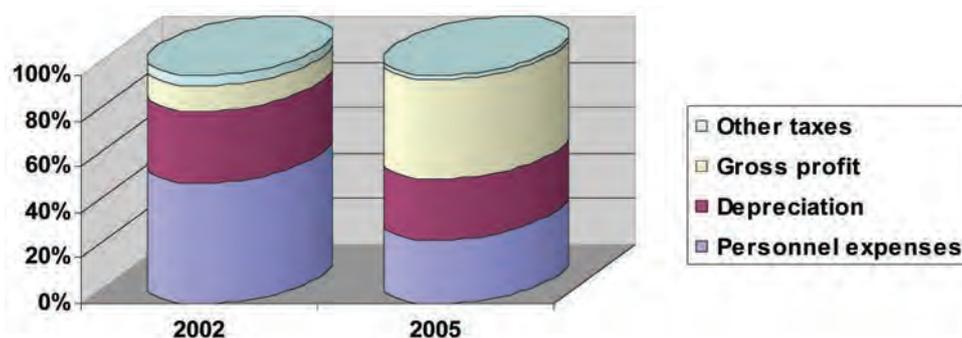
We noticed the important share of telecommunications in the total GVA of ICIs (78.46 per cent in 2005), which was followed by the manufacture of computers and other information processing equipment (6.37 per cent) and furniture manufacture (2.42 per cent).

Telecommunications and computers are industries based almost entirely on technology and the import of materials and spare parts, which are then assembled in Romania on account of the relatively low labor costs, ensuring a low GVA share and a competitive advantage for the country.

The share of GVA varies across ICI components from year to year. The share of personnel expenses of total ICIs in total GVA was 0.72 per cent in 2005, while the share of depreciation was 1.77 per cent and gross profit 1.38 per cent. The highest contributions were recorded by telecommunications.

Personnel costs and gross profits are the main components of the GVA of ICIs. In 2005 their shares were 28.2 per cent and 43.1 per cent respectively.

Graph 5.1. Structure of the GVA of ICIs with respect to Economic Components in 2002 and 2005



Source: Ministry of Finance

Analysis of the GVA structure of ICIs with respect to economic variables (personnel costs, depreciation, gross profit and taxes) reveals the following:

- the highest share (over two-thirds) was recorded in 2002 and 2005 by the cost of personnel in the telecommunications sector; this sector also made the greatest contribution to total taxes paid by ICIs (around 70 per cent);
- the structure of GVA in interdependent activities is different from one activity to another, depending on its components; on average the highest shares came from wages and gross profit;

- the average nominal monthly wage was highly different from one ICI to another, and the average activity level exceeded the national average in all years above this level, for instance in telecommunications, manufacture of television and radio receivers and manufacture of audio and video recording apparatus.

5.1.2 Employment

The average number of employees in ICIs increased from 17,733 in 2002 to 24,864 in 2005, representing an increase in the share of the total national number of employees from 0.47 per cent to 0.58 per cent (Table 5.1).

It can be seen that the average number of employees in telecommunications decreased dramatically in 2004 owing to the bankruptcy of a large number of SMEs, which in turn is explained by the elimination of tax benefits for this category of enterprise (although some of them were given back in 2005). The "brain drain" and "brain gain" phenomena also contributed to some extent to this variation in employment, with the adverse effect of the brain drain (or loss) mainly on industries relying on highly qualified personnel. In other interdependent industries (such as manufacture of paper and paperboard, manufacture of radio and television receivers and furniture manufacture) employment levels decreased in 2005 compared with 2004 as a result of less favorable economic conditions for the activities concerned, especially those engaged in international competition or those resulting from the privatization of State-owned enterprises, which were generally overstuffed and which, following privatization, suffered very sharp drops in employee numbers.

Table 5.1. Average Number of Employees in ICIs, 2002-2005

Industry	Years			
	2002	2003	2004	2005
Manufacture of paper and paperboard	1,973	1,644	1,368	958
Manufacture of other articles of paper and paperboard	140	202	192	181
Manufacture of computers and other information processing equipment	1,822	2,406	2,675	2,921
Manufacture of television and radio receivers, sound or video recording or reproducing apparatus and associated goods	449	446	416	335
Manufacture of chairs and seats	135	182	208	208
Manufacture of other office and shop furniture	364	599	717	796
Manufacture of other kitchen furniture	19	13	15	18
Manufacture of other furniture	1,519	2,160	2,250	2,130
Manufacture of musical instruments	801	1,022	1,081	805
Manufacture of games and toys	1,090	1,143	1,249	1,044
Telecommunications	8,294	5,744	2,887	10,871
Other computer-related activities	1,126	1,642	1,625	4,598
Total Interdependent	17,733	17,203	14,683	24,864
Total National	3,800,031	4,091,236	4,138,986	4,310,742
Interdependent/National (%)	0.47	0.42	0.35	0.58

Source: Ministry of Finance

Labor distribution by component industry revealed a concentration in the telecommunications sector (43.72 per cent), other related computer activities (18.49 per cent) and manufacture of computers and other information processing equipment (11.75 per cent).

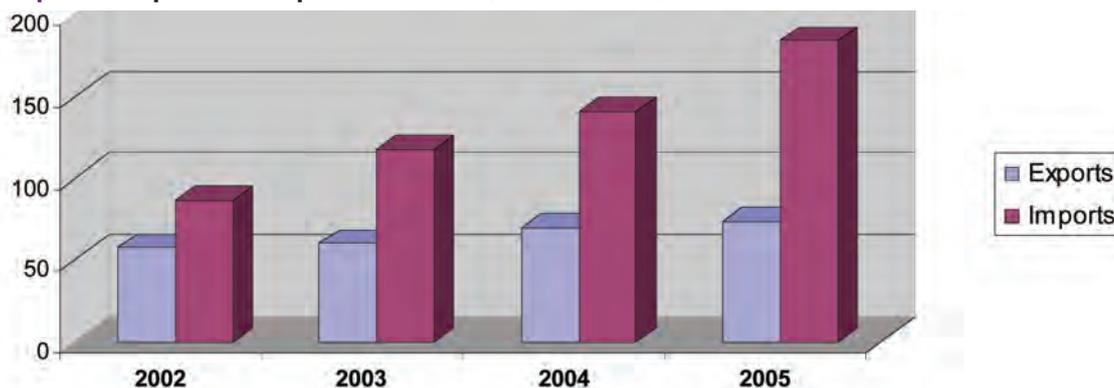
The operational profit per employee for ICIs was 2.2 times higher than in the national economy. Component industries showing levels of profit below the national average were manufacture of paper and paperboard, manufacture of other articles of paper and paperboard and manufacture of blank media. The highest salaries were paid in telecommunications and the manufacture of radio and television receivers.

The operational profits tended to fluctuate, both for overall ICIs and for most of the component industries (especially telecommunications).

5.1.3 International Trade

The economic contribution of ICIs to international trade was characterized by an increase in exports from 57.3 million euros in 2002 to 73.2 million euros in 2005, while imports recorded much higher increases, from 86.8 million euros in 2002 to 184.1 million euros in 2005.

Graph 5.2. Exports and Imports, 2002-2005 ('000'000 euros)



Source: Ministry of Finance

The share of the exports of ICIs in the total for Romania decreased from 0.39 per cent in 2002 to 0.33 per cent in 2005, while the share of imports increased from 0.46 per cent to 0.57 per cent, underlining the extent of dependency on imports. Exports were actually following an upward trend, yet with much slower growth than imports.

The highest export share was recorded in the manufacture of furniture (89.74 per cent of total ICI exports in 2002 and 92.14 per cent in 2005), while the highest import share was recorded for the manufacture of computers and other information processing equipment (40.3 per cent in 2005 compared with 43.0 per cent in 2002) and the manufacture of radio and television receivers (43.9 per cent in 2005 compared with 40.0 per cent in 2002).

Table 5.2. Trade Balance for ICIs (in euros at current prices)

Industry	2002	2003	2004	2005
Manufacture of paper and paperboard	-1,008	-1,344	-1,569	-2,186
Manufacture of other articles of paper and paperboard	-0,136	-0,151	-0,222	-0,271
Manufacture of photographic chemicals	-0,581	-0,637	-0,739	-0,736
Manufacture of prepared unrecorded media	-3,319	-5,004	-5,743	-6,561
Manufacture of computers and other information processing equipment	-37,256	-45,442	-53,309	-73,713
Manufacture of television and radio receivers etc.	-31,972	-51,248	-62,088	-79,194
Manufacture of chairs and seats	1,073	1,106	1,454	1,431
Manufacture of other office and shop furniture	-0,100	-0,100	-0,159	-0,192
Manufacture of other kitchen furniture	0,012	-0,039	-0,055	-0,119
Manufacture of other furniture	47,331	49,754	57,200	58,909
Manufacture of musical instruments	-0,314	-0,468	-0,514	-0,893
Manufacture of games and toys	-3,271	-3,598	-5,069	-7,496
Total Interdependent	-29,540	-57,171	-70,812	-111,021

Source: NIS

The deficit in the trade balance in the period from 2002 to 2005 increased by over 200 per cent, which reflected the continuing imbalance between ICI exports and imports. The highest contribution to the trade deficit was made by the manufacture of computers and other information-processing equipment, the manufacture of radio and television receivers and furniture manufacture.

The factors contributing to the increased imbalance between exports and imports were closely connected with the interdependent industries' need to increase their technological levels in response to international demand, as well as the need for diversification of domestic demand.

5.2 Economic Contribution of the Partial Copyright Industries

Partial copyright industries (partial CIs) are industries involved only partly in copyright-related activities. A certain proportion of the activity of these industries relates to works and other protected subject matter and involves creation, production and manufacture, performance, broadcasting, communication and exhibition or distribution and sale. They cover apparel, textiles, footwear, jewelry coins, furniture, household goods, china and glass, wall coverings and carpets, toys and games, architecture, engineering, surveying, interior design and museums.

The copyright factor was calculated on the basis on expert estimations and opinions; its values are presented in the methodology at the beginning of this study.

The approximate value of the copyright factor varies widely, especially regarding the contribution of CIs to employment, as the majority of employees do not have a direct connection with the production and/or distribution of copyright-protected goods.

Table 5.3. Economic Contribution of Partial CIs to the National Economy, 2002-2005

Indicators	2002	2003	2004	2005
Share in GVA	0.45	0.66	0.53	0.53
Share in employment	0.79	0.92	0.89	0.82
Share in exports	0.29	0.28	0.24	0.23
Share in imports	0.23	0.21	0.20	0.19

Source: NIS

The highest participation of partial CIs in the national economy was recorded for employment and GVA, which is explained by the following:

- (a) partial industries are numerous and involve salaries and labor costs to a greater extent;
- (b) as Romania is a net importer of copyright goods, all partial CIs are involved to some extent in those activities. It is accepted that an increasing share of the goods on the Romanian market are of foreign origin or produced and distributed subject to foreign copyright.

5.2.1 Gross Value Added

The following component industries contributed the most to total partial CI GVA: architecture and engineering activities and related technical consultancy (26.4 per cent), manufacture of clothes (over 25 per cent) and manufacture of footwear (16.5 per cent). These industries also played the most important role in terms of overall economic contribution.

When analyzed with reference to the CANE code, the greatest contribution was recorded in 2002 by the manufacture of other outerwear, while in 2005 that place was taken by architecture and engineering activities and related technical consultancy; the latter had a share increase of 2 per cent in 2005 compared with 2002.

Table 5.4. Structure of Partial CI GVA by Component Industry, 2002-2005

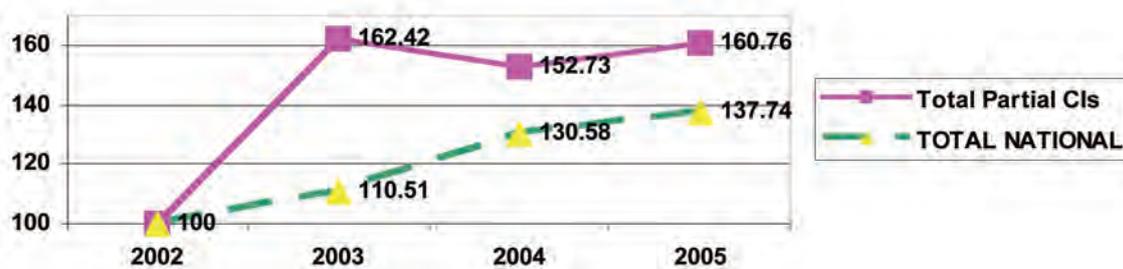
Industry	Years (%)			
	2002	2003	2004	2005
Manufacture of made-up textile articles, except apparel	0.97	0.72	0.65	1.07
Manufacture of carpets and rugs	0.24	0.10	0.09	0.10
Manufacture of other textiles n.e.c.	0.33	0.31	0.29	0.19
Manufacture of knitted and crocheted fabrics	0.18	0.17	0.26	0.26
Manufacture of knitted and crocheted hosiery	0.18	0.11	0.26	0.22
Manufacture of leather clothes	0.43	0.40	0.40	0.24
Manufacture of other outerwear	27.82	25.14	29.22	25.93
Manufacture of underwear	1.93	1.78	1.95	2.10
Dressing and dyeing of fur, manufacture of articles of fur	0.01	0.03	0.05	0.04
Manufacture of footwear	24.48	19.14	18.56	16.55
Shaping and processing of flat glass	0.38	0.37	0.47	0.58
Manufacture of hollow glass	6.66	7.19	6.20	4.64
Manufacture of ceramic household and ornamental articles	9.26	6.41	7.12	5.80
Manufacture of ceramic tiles and flags	0.89	0.82	1.46	6.90
Manufacture of cutlery	0.01	0.03	0.03	0.02
Striking of coins	0.78	0.52	0.44	0.48
Manufacture of jewelry and related articles n.e.c.	0.47	0.55	0.57	0.71
Architectural and engineering activities and related technical consultancy	24.68	31.98	24.95	26.53
Other services mainly delivered to enterprises	0.00	3.86	6.71	6.22
Activities of other membership organizations n.e.c.	0.02	0.09	0.11	1.08
Museum activities and preservation of historical sites and buildings	0.29	0.28	0.22	0.31
Total Partial CIs	100.00	100.00	100.00	100.00

Source: NIS

Some industries, such as the manufacture of footwear and glass and ceramics, showed a decreased share in the GVA of the total partial industries, while the manufacture of other clothing articles, architectural and engineering activities and related technical consultancy and other services delivered mainly to enterprises recorded an increase.

The evolution of the GVA of partial CIs was above to the national average, especially for component industries with important shares, but also for components with relatively low shares.

Graph 5.3. Change in Partial CI Gross Value Added, 2002-2005 (2002=100)



Source: NIS

Nine component industries recorded a higher average share than the partial CIs, and five experienced lower output in 2005 than in 2002 (manufacture of carpets, rugs and other fabrics, manufacture of leather clothing, striking of coins, museum activities and preservation of historical sites and buildings). The structure of GVA, calculated according to income, reveals the importance of personnel costs and share of gross profit.

Significant differences were noticed within the component industries of partial CIs.

The analysis for 2002 revealed that personnel costs took the greatest share in GVA for the manufacture of knitted and crocheted fabrics (80.85 per cent), while the smallest share went to other membership activities n.e.c (15.55 per cent). As regards depreciation and gross profit, the greatest and smallest contributions to the formation of GVA of partial CIs were made by:

- depreciation for news agency activities (13.87 per cent) and striking of coins (3.60 per cent);
- gross profit for library and archive activities (68.75 per cent) and manufacture of knitted and crocheted fabrics (10.31 per cent).

In 2005 the situation changed significantly regarding not only industries with extreme values for their contribution to GVA, but also the actual size of their share. The GVA for the manufacture of ceramic household and ornamental articles was generated to a large extent by personnel costs, whereas for the manufacture of ceramic tiles and flags the prime economic variable generating GVA was depreciation. In associated activities, gross profit represented 94 per cent of the industry's GVA, but for the manufacture of carpets and rugs that figure was only 4 per cent.

5.2.2 Employment

Employment, expressed as the average number of full-time employees, showed a relatively small increase compared with core CIs, but it was above the national average at 17.4 per cent compared with 13.4 per cent.

Table 5.5. Average Number of Employees in Partial CIs, 2002-2005

Industry	2002	2003	2004	2005
Wholesale and commission trade, except motor vehicles and motorcycles	16,779	38,854	49,938	67,698
Retail trade, except motor vehicles and motorcycles; repair of personal and household goods	8,825	10,150	11,594	16,565
Land transport; transport via pipelines	19,712	20,131	18,941	23,034
Water transport	639	592	711	12,388
Air transport	1,974	2,047	2,852	1,446
Supporting and auxiliary transport activities; activities of travel agencies	3,834	4,243	4,595	6,047
Post and telecommunications	5,669	4,921	5,221	6,493
Total Non-Dedicated CIs	57,599	77,782	94,254	133,896
Non-Dedicated CIs/National (%)	0.28	0.36	0.36	0.39

Source: NIS

The distribution of labor in partial CI components shows a concentration in the manufacture of leather and fur products and footwear. An important share in the increase in labor was recorded for architectural and engineering activities and related technical consultancy.

If we use the CANE classification, the highest shares for employment were recorded in the manufacture of other outerwear (over 37 per cent in 2005), the manufacture of footwear (26.2 per cent), architectural and engineering activities and related technical consultancy, figures similar to those for GVA.

GVA and employment structures were also influenced by the fact that in Romania there has been a great increase in so-called "lohn" manufacture, namely the manufacture of clothes and footwear based on foreign orders, models and materials using domestic labor. The goods are produced in Romania because of its lower labor costs but sold as end products on foreign markets.

If we analyze the GVA structures in the component industries, we notice a significant contribution from the manufacture of clothes, architectural and related activities and the manufacture of footwear.

Wages in partial CIs were below the national average in the period from 2002 to 2005, although a number of component industries, such as architectural activities, did record wages above it. Wages in the manufacture of clothes and footwear were below the national average, which resulted in a relatively modest contribution to value added.

The average wage in partial CIs approached the national average in the period from 2003 to 2004 thanks to a relatively good wage dynamic from those industries.

Labor productivity in partial CIs was in general lower than the national average. Several industries, such as textiles, architecture, engineering and related technical services, were above the national average in 2005. Most partial CIs were below the national average in productivity, however.

The change in productivity was above the national average for a large number of the component industries of partial CIs.

It is worth mentioning that the copyright component evaluation of many partial CIs (e.g. architecture, engineering, surveying), which was done separately from their related services, required very detailed analysis.

5.3 Economic Contribution of Non-Dedicated Copyright Support Industries

Non-dedicated copyright support industries (non-dedicated CIs) include the wholesale and retail trade, transport, storage, maintenance, rental services and repair of motor vehicles for business use and computers, where those support activities are connected with the production and distribution of copyright-protected goods and services. The industries concerned figure in the final stages of copyright-based activities, and comprise mainly services rendered to businesses and means of product distribution. They represent the spillover effect of other copyright-based activities in upstream industries.

In a more aggregated formula, non-dedicated industries are wholesale and retail trading in general, general transportation, telephony and Internet, with a proportion attributable to copyright works and other protected subject matter. The distribution aspects of these industries had to be very carefully analyzed when estimates were made of their contribution to core industries, due account being taken of the specific nature of activities related to many other, extra-copyright industries.

5.3.1 Gross Value Added

The economic contribution of non-dedicated industries to adjusted GDP fluctuated between 0.28 per cent and 0.39 per cent in the period analyzed (Table 5.6), which shows that the spillover effect of the core copyright industries is still low.

Table 5.6. GVA for Non-Dedicated Support Industries, 2002-2005 ('000'000 euros)

Industry	2002	2003	2004	2005
Wholesale and commission trade, except motor vehicles and motorcycles	16,779	38,854	49,938	67,698
Retail trade, except motor vehicles and motorcycles; repair of personal and household goods	8,825	10,150	11,594	16,565
Land transport; transport via pipelines	19,712	20,131	18,941	23,034
Water transport	639	592	711	12,388
Air transport	1,974	2,047	2,852	1,446
Supporting and auxiliary transport activities; activities of travel agencies	3,834	4,243	4,595	6,047
Post and telecommunications	5,669	4,921	5,221	6,493
Total Non-Dedicated CIs	57,599	77,782	94,254	133,896
Non-Dedicated CIs/National (%)	0.28	0.36	0.36	0.39

Source: NIS

Trade and transport show the greatest contribution to the GVA of non-dedicated industries at over 90 per cent.

The GVA trend was upward, with an increase of almost 100 per cent for all non-dedicated CIs. The change in GVA among the component industries was perverse and even contradictory, with significant increases being recorded for wholesale (3.3 times) and for retail (1.5 times), while terrestrial and air transport faced reductions. Water transport made an insignificant contribution.

5.3.2 Employment

Employment after correction for the copyright factor in the non-dedicated CIs increased from 11,821 employees in 2002 to 18,528 in 2005. The share of non-dedicated CIs in total national employment increased from 0.31 per cent to 0.43 per cent (Table 5.7).

Table 5.7. Average Number of Employees in Non-Dedicated CIs, 2002-2005 (number of workers)

Industry	2002	2003	2004	2005
Wholesale trade and commission trade, except motor vehicles and motorcycles	2,169	6,972	5,697	6,175
Retail trade, except motor vehicles and motorcycles; repair of personal and household goods	3,140	3,468	4,008	4,931
Land transport; transport via pipelines	4,134	3,109	3,391	3,303
Water transport	104	102	105	1,998
Air transport	110	112	112	70
Supporting and auxiliary transport activities; activities of travel agencies	320	395	410	431
Post and telecommunications	1,819	1,789	1,755	1,477
Renting of office machinery and equipment, including computers	1	1	2	3
Maintenance and repair of office, accounting and computing machinery	23	39	45	140
Total Non-Dedicated CIs	11,821	15,989	15,524	18,528
Total National	3,800,031	4,091,236	4,138,986	4,310,742
Non-Dedicated CIs/National (%)	0.31	0.39	0.38	0.43

Source: NIS

The major employers were in the two main component industries, trade and transport. Labor productivity in non-dedicated CIs was below the national average (around 8 per cent), even though some component industries were above it, namely air transport and rental of office machinery and equipment, including computers (2.8 times), support and auxiliary transport activities; travel agency activities (1.9 times) and wholesale and commission trade, except for motor vehicles and motorcycles (1.5 times). Analysis of GVA in relation to economic variables shows that profits and wages had the highest shares at 43.23 per cent and 38.14 per cent respectively, which underlines their importance in the trade and transport sectors.

The relatively high share of gross profit compared with the share of wages was an effect of the specific behavior of the trade and transport sectors, which increased the selling prices of copyright-based goods by applying various commissions.

Table 5.8. Average Monthly Nominal Gross Salary for Non-Dedicated CIs, 2002-2005 (euros/month)

Industry	2002	2003	2004	2005
Wholesale and commission trade, except motor vehicles and motorcycles	166	111	164	219
Retail trade, except motor vehicles and motorcycles; repair of personal and household goods	82	83	83	99
Land transport; transport via pipelines	180	154	154	185
Water transport	172	174	181	144
Air transport	457	436	458	569
Supporting and auxiliary transport activities; activities of travel agencies	328	308	317	390
Post and telecommunications	154	150	160	225
Renting of office machinery and equipment, including computers	83	88	148	133
Maintenance and repair of office, accounting and computing machinery	131	116	117	138
Total Non-Dedicated CIs	154	125	147	177
Non-Dedicated CIs/National (%)	95	85	90	86

Source: NIS

In general, average wages in non-dedicated CIs (Table 5.8.) were below the national average, with the exception of air transport and tourism.

Chapter 6 International Comparisons

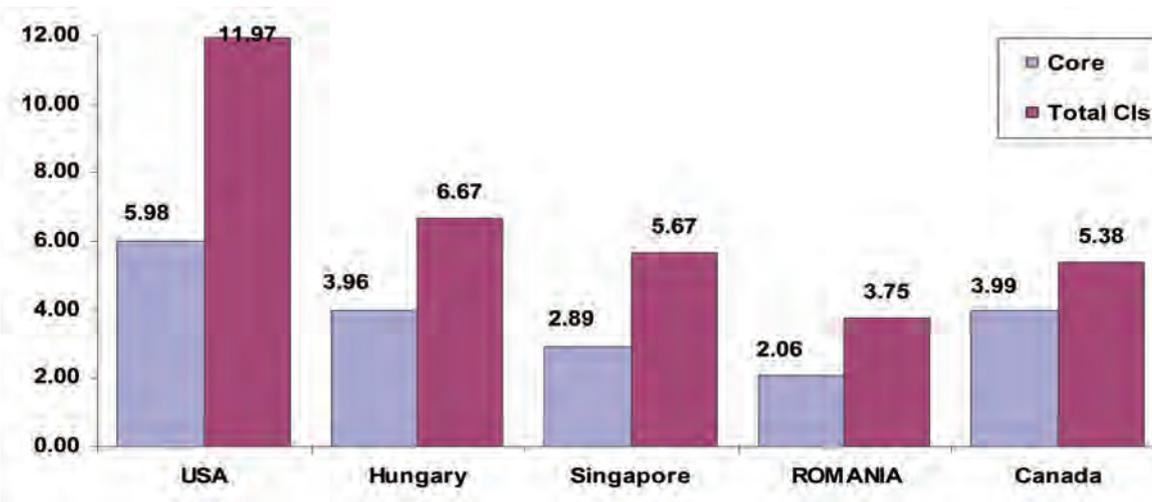
The international comparison of Romania with other countries with regard to the economic contribution of CIs took into account:

- methodological similarities to other countries;
- the final report on *The Contribution of Copyright and Related Rights to the European Economy* (2003) by Robert G. Picard, Timo E. Toivonen and Mikko Grönlund, which includes data from 2000 on copyright-based industries in the 15-country EU (EU-15);
- the study *National Studies on Assessing the Economic Contribution of the Copyright-Based Industries, Creative Industries, No1*, WIPO, May 2006, which includes national studies from Canada, Latvia, Hungary, Singapore and the United States;
- the study *The Economy of Culture in Europe*, UNESCO Culture Sector, The Global Alliance for Cultural Diversity, Brussels, 2006.

6.1 Contribution of Total Copyright Industries and Core Copyright Industries to GDP

A comparison of the contribution of total CIs and core CIs to GDP in Romania with the corresponding contribution in other countries was made for 2002. This comparative analysis reveals that the total contribution of Romanian CIs and core CIs to GDP was smaller than that of their counterparts in Canada, Hungary, Singapore and the United States (Graph 6.1). This is explained mainly by the lower level of economic and social development, and the consequent limited financial capacity and access to capital markets of the industries concerned.

Graph 6.1. The Contribution of Total CIs and Core CIs to GDP in 2002



Source: Own calculations and National Studies on Assessing the Economic Contribution of the Copyright-Based Industries, WIPO, 2006, pp. 340-341; IIPA Press Release on The 2006 Report, January 30, 2007

The comparison with EU member States and the United States in 2002 reveals that while the core CI contribution to GDP was only 2.06 per cent for Romania, the equivalent contributions in the US and some EU countries were much greater.

In Romania as well as in other EU countries, the contribution of total and core CIs to GDP was greater than that of certain industries such as the manufacture of chemicals, rubber and plastics and real estate operations (Annex 6.1).

Table 6.1. Evolution of Total CI Share in GDP in Several Industrialized Countries (%)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Australia	2.90	2.90	2.90	3.0	3.0	3.0	3.0	3.15	3.30	3.30	3.30	N/A
Canada	3.17	3.93	3.98	3.88	4.19	4.25	4.35	4.61	4.95	5.04	5.27	5.38
US	5.47	5.37	5.53	5.72	6.00	6.20	6.36	6.92	7.30	7.50	7.75	N/A

Source: Wall Communication, Inc. 2004

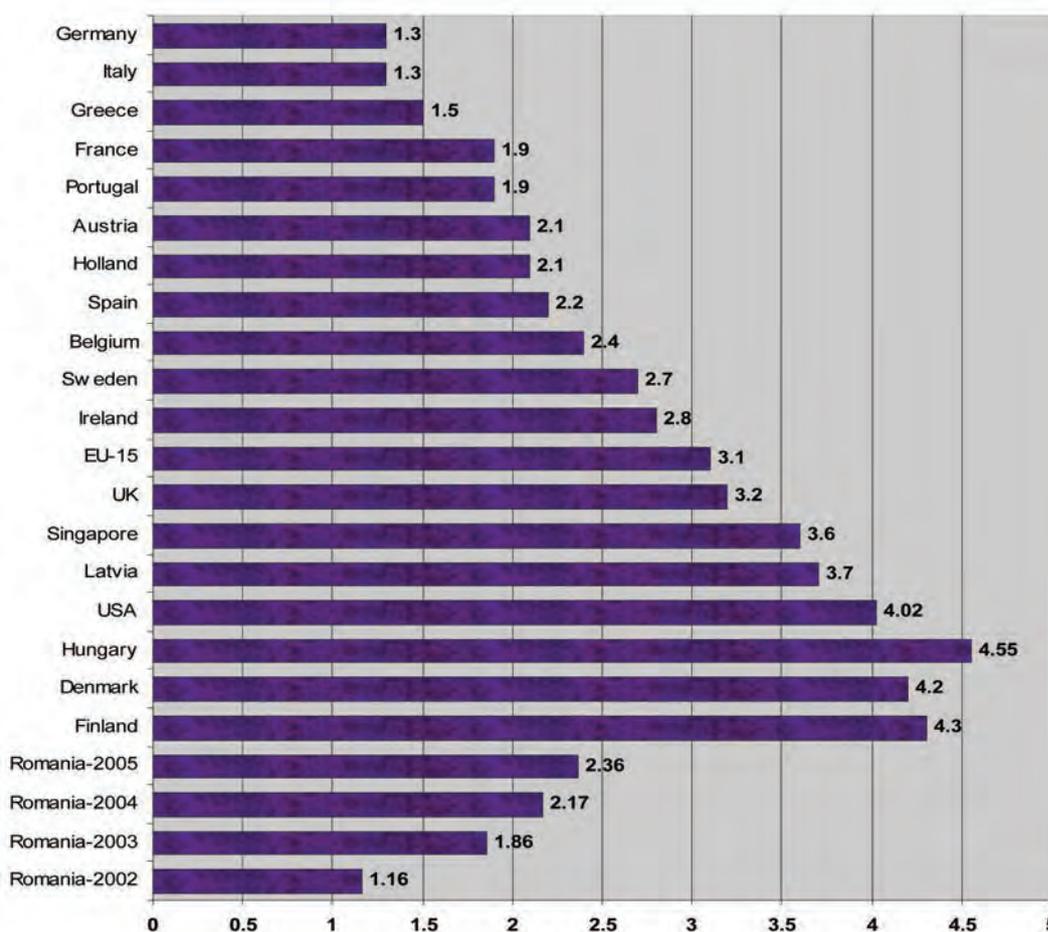
In Australia, Canada and the US, there was for a long time an upward trend in the total CI share in GDP (Table 6.1). The same tendency was also noted over a shorter period in Romania, where the contribution of total CIs to GDP increased from 3.75 per cent to 5.55 per cent, and the share of core from 2.06 per cent to 3.55 per cent, in the period from 2002 to 2005. This general tendency actually reflects the importance of CIs to the development of countries at different stages of social and economic growth.

For Romania, there are two major factors of rapid development of CI activities: transition to a market economy, political democratization and freedom and openness to globalization on the one hand, and the impact of ICT (digitization of the economy) and the rapid growth of imports of copyright goods and services, including foreign direct investment, on the other.

6.2 Contribution of Core Copyright Industries to Employment

In all countries, total CIs and core CIs were dynamic sectors of the economy, so their share in the total number of employees showed an general upward trend in the medium and long term, although there were significant variations in some years.

Graph 6.2. Core CI Contribution to Employment in Several Countries in 2000, and in Romania from 2002 to 2005 (%)

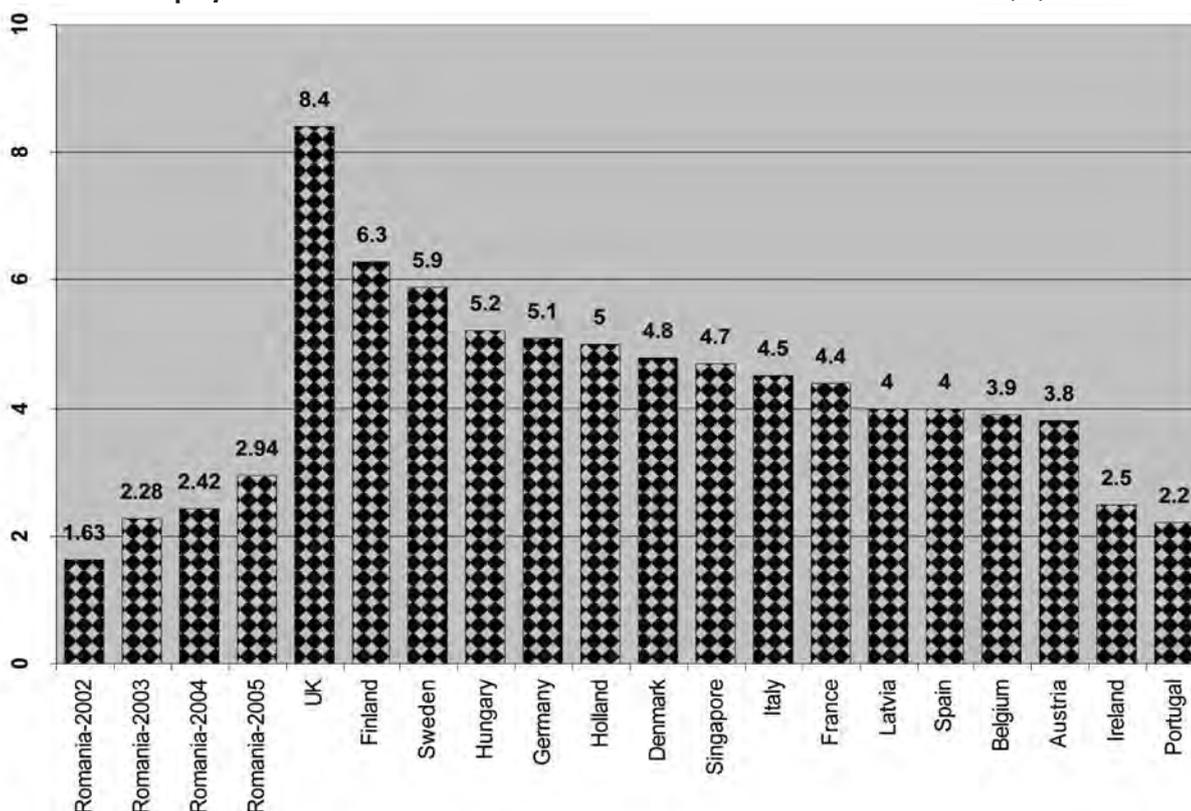


Source: Own calculations and National Studies on Assessing the Economic Contribution of the Copyright-Based Industries, WIPO, 2006, pp. 340-341

The proportion of core CI employees was lower in Romania than in several EU countries and indeed the EU average. However, there were also some EU countries with a lower proportion than Romania: Graph 6.3 shows the specific conditions of each country.

A remarkable result is that the figures for Romania in 2002 were very close to those for Germany and Italy.

Graph 6.3. Aggregated Contributions of Core and Interdependent CI Employment to Total National Employment in Several Countries in 2002 and in Romania from 2002 to 2005 (%)



Source: Own calculations and National Studies on Assessing the Economic Contribution of the Copyright-Based Industries, WIPO, 2006, pp. 340-341

If we allow for the contribution of core and Interdependent CIs, we notice that the gap between Romania and the other EU member States is narrowing, which is partly explained by a stronger spillover effect of core CIs in Romania.

6.3 Growth Rate of Total CIs and Core Copyright Industry Indicators

The percentage GVA growth rate of CIs, especially core CIs, in Romania was relatively high from 2002 to 2005.

Table 6.2. Average Annual Growth Rate of GVA in Romania for CIs

Industry	Average annual growth rate (%)
Total CIs, of which	26.78
Core	33.49
Interdependent	15.57
Partial	17.17
Non-Dedicated Support	24.21
Total National Economy	11.26

Source: Own calculations

The GVA change in CIs and core CIs in industrialized countries was higher than the national average growth in the economy, yet the rhythm of increase was consistently lower than in Romania. Even though the comparison is not general, our conclusion is borne out by the study *The Economy of Culture in Europe*, October 2006, which shows that from 1999 to 2003 the average annual growth rate of GVA from the cultural and creative sectors in Romania was 29 per cent, while in the EU it was 6.6 per cent (Annex 6.2). The difference of CIs and core CIs in Romania between 2002 and 2005 is due to the following:

- the Romanian economy succeeded in overcoming the severe economic decline of 1996 to 1999, recording relatively high growth rates (among the highest in Central Europe);
- the initial levels of the economic indicators for CIs and core CIs was relatively low, which allowed for high annual growth;
- the transition to a market economy reached the stage at which the predominance of the private sector brought about an improvement in the performance of market mechanisms, allowing for a better connection between CIs and other sectors, with generally favorable results;
- the FDI volume increased significantly and influenced the production figures of CIs;
- in this period, Romania's preparation for EU accession entered its final phase, which speeded up CI development.

6.4 Productivity and Other Performance Indicators

Labor productivity calculated as GVA per employee offered some conclusions regarding the efficiency of copyright-based industries, more precisely in terms of the value created by human resources. Comparable data at our disposal showed that in 2000 labor productivity in the EU-25 was 86,173 euros/employee in CIs and 101,538 euros/employee in core CIs (see *The Contribution of Copyright and Related Rights to the European Economy*, Final Report, October 2003, p.119).

The higher productivity level in core CIs reveals the effect of higher investment compared with non-core industries. In other words, inducements to invest in the software, database and press and publications sectors showed stronger beneficial effects compared with such inducements in other sectors. In 2000, the highest level of productivity in core CIs was recorded by Germany (143,906 euros/employee), while the lowest was Romania (23,149 euros/employee).

Table 6.3. GVA per Employee in Romania, 2002-2005 (euros/employee)

CIs	Years			
	2002	2003	2004	2005
Core	9,514	9,155	9,823	11,869
Interdependent	11,023	13,696	6,696	14,716
Partial	3,056	3,789	3,798	5,080
Non-dedicated	4,872	4,863	6,119	7,224
Total CIs	7,370	7,842	7,750	10,458
Total National	5,357	5,275	6,386	7,887

Source: Own calculations

Labor productivity in core CIs in Romania in 2005 was 11,869 euros per employee compared with an average of 10,458 euros per employee recorded by total CIs. The gap between Romania and the EU average was very wide; a ratio of almost 11:1 in 2005. Compared with Germany, the gap was 13:1 in 2000.

Unlike in EU member States, where the GVA per employee in core CIs is higher than that in interdependent CIs, the reverse is true in Romania: labor productivity is higher in interdependent than in core CIs. At first glance this situation might seem atypical, but the explanation is that Romania is an important net importer of copyright goods, and that leads to the development of non-core industries, especially the interdependent sector, which in turn has a favorable impact on the core CIs of other countries on account of transport, marketing and distribution services.

If we take 2002 as a reference for Romania and 2000 for the EU, the gaps are even wider.

Table 6.4. GVA per Employee in Core CIs in Romania, 2002-2005 (euros/employee)

Core CIs	2002	2003	2004	2005
Software and database	11,785	11,766	10,328	12,415
Press and literature	8,546	7,690	7,997	10,118
Theatrical productions and opera	2,740	4,085	10,449	4,449
Photography	3,131	2,746	3,187	3,955
Radio and television	13,026	13,357	16,133	20,537
Advertising	8,297	8,831	9,012	11,596
Professional organizations	15,092	68,947	3,388	13,136
Motion pictures and video	8,779	5,680	11,005	11,143
Total Core Industries	9,512	9,155	9,824	11,868
Total National	5,357	5,275	6,386	7,887

Source: Own calculations

The highest labor productivity levels in 2005 for core CIs in Romania (Table 6.4) were in radio and television (20,537 euros per employee), software and database (12,415 euros) and advertising (11,596 euros). However, total CIs and the productivity of the respective component industries were much lower than the core CI levels in industrialized countries, according to the data in Annex 6.3, which shows variations in this respect between Romania and other countries.

Labor productivity as a ratio of GVA to total personnel costs indicates the efficacy of employment use. In Romania the ratio improved for total CIs from 2.1:1 in 2002 to 2.5:1 in 2005. For core CIs the indicator was constant, with small annual fluctuations, and with a major impact on total CIs (Table 6.5).

Table 6.5. GVA to Personnel Expenses in CIs (euros)

CIs	Years			
	2002	2003	2004	2005
Core	2.4	2.5	2.7	2.5
Interdependent	1.9	3.8	2.3	3.5
Partial	1.6	1.7	1.7	1.6
Non-dedicated	2.0	2.4	2.6	2.6
Total	2.1	2.5	2.5	2.5
Total National	2.0	2.2	2.4	2.4

Source: Own calculations

The results from the above table were also borne out by the study *The Economy of Culture in Europe*, Brussels, October 2006. This study presented values very close to the results obtained by us for the cultural and creative sector, which is smaller in terms of the number of activities than the total CIs used in our research.

Table 6.6. Assessment of the Cultural-Creative Sector's Competitiveness in Romania and Other Countries, 1999-2003

Country	Productivity (GVA:personnel costs)					Profitability 1999-2003 (%)				
	1999	2000	2001	2002	2003	1999	2000	2001	2002	2003
Austria			1.89	1.91	1.24	8.8	6.6	9.2	11.7	6.6
Belgium	1.52	1.5	1.51	1.41	1.93	10.7	10.9	9.5	10.0	10.4
Czech Rep.	1.21	1.79	1.72	1.65	1.58	...	...	...	37.9	12.4
Denmark	1.39	1.28	1.27	1.3	1.26	8.8	11.2	10.3	8.6	7.1
Estonia	1.4	1.68	1.62	1.51	1.52	6.4	9.5	8.0	8.8	10.2
Finland	1.52	1.49	1.46	1.39	1.41	12.6	11.7	11.0	9.8	11.3
France	1.63	1.62	1.56	1.59	1.59	11.3	11.7	10.8	11.1	10.8
Germany	1.71	1.4	1.54	1.52	1.55	...	9.6	9.6	7.2	8.7
Greece	...	...	...	...	...	14.1	12.3	10.9	10.2	10.0
Hungary	1.7	2.11	1.66	1.76	1.99	5.4	6.4	6.8	7.3	7.4
Ireland	...	...	...	...	...	11.1	13.9	11.4	11.5	12.3
Italy	1.67	1.69	1.68	1.61	1.57	9.0	8.2	8.1	8.2	8.8
Latvia	-0.7	-0.4	0.62	1.29	1.95	1.7	1.8	3.6	3.5	5.7
Lithuania	1.58	1.54	1.48	1.49	1.4	11.3	1.2	11.0	11.2	11.9
Luxemburg	...	...	...	...	...	3.3	3.9	1.4	3.7	3.8
Netherlands	1.61	1.17	1.22	1.28	1.34	9.4	11.1	11.7	6.9	9.4
Poland	1.76	1.16	1.19	1.33	1.44	11.0	4.8	6.1	6.2	6.0
Portugal	1.72	1.74	1.39	1.59	1.53	11.9	11.7	8.5	10.4	9.4
Slovakia	1.23	1.34	1.2	1.18	1.32	5.0	5.3	5.6	7.4	6.9
Slovenia	1.61	1.53	1.74	1.75	1.96	13.6	13.6	15.1	12.6	10.3
Spain	1.51	1.5	1.44	1.43	1.43	9.2	9.2	8.3	8.5	8.0
Sweden	1.55	1.56	1.51	1.37	1.49	10.5	10.9	10.1	9.5	9.9
UK	1.52	1.47	1.36	1.29	1.38	10.3	8.7	8.9	8.7	8.7
Bulgaria	1.52	1.53	1.56	1.69	1.7	7.1	5.5	6.4	7.3	7.7
Romania	1.46	1.76	1.86	2.08	3.06	6.5	9.1	11.1	14.0	15.4
Norway	1.33	1.3	1.25	1.27	1.28	8.3	7.7	7.5	7.0	7.3
Iceland	1.19	1.27	1.18	1.33	1.24	9.50	11.10	8.70	13.50	11.80
Total EU-25	1.43	1.45	1.45	1.48	1.52	9.30	9.30	8.90	10	9
Total 30 Countries	1.42	1.45	1.45	1.5	1.57	9.1	9.1	8.8	10.1	9.2

Source: *The Economy of Culture in Europe, Study prepared for the European Commission (Directorate General for Education and Culture), October 2006*

It is interesting to note that the indexes of CI profitability worked out in our study (Chapter 4) are 2-3 per cent lower than in the above-mentioned study for the cultural-creative sector. This is explained by the smaller number of industries studied. We also note that the profitability of the cultural-creative sector in Romania is higher than the EU-25 average and that of the other new member States. Our research reveals that the profitability index in core CIs in 2000-2005 reflected a downward trend, owing to high values in the initial periods (early 2002), when core CI activities had just started to develop.

The level of profitability of Romanian CIs can be considered satisfactory when compared with that of other sectors, although it has shown a downward trend and the differences between the component industries are quite considerable, which to a certain extent is normal in view of the wide diversity and the specificity of CI components.

6.5 Investment in Knowledge and Creativity

CIs are a strategic domain for investment policies, and a growing volume of investment expenditure in intangible assets is an important factor for both developed and developing countries: it offers evidence of the economic contribution of CIs to the knowledge-based economy and the information society, which is driven by scientific and cultural-artistic creativity.

Table 6.7. Level of Investment in Knowledge and Creativity Within the Cultural and Creative Sector; Evolution of Intangibles to Turnover Ratio, 1999-2003 (%)

Country	Years				
	1999	2000	2001	2002	2003
Austria	0.2	0.1	5.1	5.0	2.5
Belgium	1.4	3.5	3.0	2.6	2.3
Cyprus	...	...	...	...	...
Czech Republic	...	...	...	0.0	12.4
Denmark	3.0	8.9	9.7	10.7	7.9
Estonia	1.5	3.2	2.5	1.4	1.4
Finland	2.7	2.4	2.3	2.6	4.7
France	4.1	4.2	4.7	4.5	4.2
Germany	...	2.5	2.5	1.2	1.1
Greece	1.7	3.0	2.8	2.2	2.5
Hungary	0.6	1.9	1.8	1.3	1.9
Ireland	11.1	13.9	11.4	11.5	12.3
Italy	3.2	3.6	4.0	3.4	3.6
Latvia	0.8	0.7	0.7	0.7	0.8
Lithuania	11.3	11.2	11.0	11.2	11.9
Luxembourg	0.0	0.5	0.0	1.1	0.8
Malta	...	...	...	...	...
Netherlands	15.2	7.6	12.7	11.4	6.0
Poland	0.7	...	...	0.8	1.2
Portugal	1.0	1.1	1.6	1.8	1.5
Slovakia	0.5	0.5	0.3	0.3	0.3
Slovenia	1.7	1.5	4.6	2.3	0.7
Spain	3.2	4.0	3.5	3.2	2.9
Sweden	5.6	5.3	6.0	4.9	4.4
UK	6.3	11.1	11.8	9.0	8.4
Bulgaria	1.3	3.9	1.6	1.5	1.3
Romania	0.6	0.6	0.7	0.9	1.2
Norway	5.6	4.4	5.1	5.0	4.9
Iceland	4.2	4.3	2.4	4.2	4.2
Total EU-25	3.6	4.3	4.9	4.0	4.2
Total 30 countries	3.5	4.2	4.5	3.9	4.0

Source: *The Economy of Culture in Europe. Study prepared for the European Commission (Directorate General for Education and Culture), October 2006*

Table 6.7 shows that in comparison with the EU-25 countries, the EU-12 countries (new members) have a lower percentage share of investment in knowledge and creativity. In Romania, for instance, the share was 1.2 per cent in 2003 as against 12.3 per cent in Ireland, 8.4 per cent in the United Kingdom and 6 per cent in the Netherlands. This disparity between the two groups is less marked, however, than the gaps in productivity and profitability. At the same time, relative stability or small variations can be seen in the corresponding share for almost all countries over the period analyzed.

Judging by international comparisons between Romania and developed countries it is evident that CIs in Romania, while still modest, are expanding rapidly.

In an economic study conducted in 2006¹⁰ the International Intellectual Property Alliance (IIPA) showed that US copyright industries continued to lead the US economy in their contribution to job growth, GDP and foreign trade. Referring to the US copyright industries in 2005, Eric H. Smith, the representative of IIPA, said: "What is clear from this and previous studies of the copyright industries is that their contribution to this country's economic growth continues to increase in size and importance. Copyright industries are uniquely dependent on governments' willingness to enforce good laws, particularly as globalization expands and Internet and broadband penetration escalates rapidly around the globe."

The huge potential of e-commerce and the transmission of valuable copyright content over the Internet are major factors of continued growth and productivity in national economies, including that of Romania. Romania's integration into the EU and the effects of globalization will help strengthen the convergence process in Romanian copyright industries, at the same time as their specificities and their capacity for imparting positive economic, social and cultural influences are enhanced.

¹⁰ Siwek S., *Copyright Industries in the US Economy: The 2006 Report*, www.iipa.com

Chapter 7 Conclusions and Recommendations

7.1. Conclusions

Copyright-based industries in Romania have distinguished themselves by their dramatic quantitative and qualitative development in the period from 2002 to 2005, which has come about as a result of the profound changes occurring in the Romanian economy and society in general during the country's transition towards democracy and a market economy.

In the period analyzed, the Romanian economy recorded relatively high growth rates, relatively low unemployment and decreasing inflation from double-digit to single-digit levels. The period was characterized by the country's preparation for EU accession, the improved operation of its markets, a substantial increase in foreign direct investment (FDI) and the predominance of the private sector in the Romanian economy.

CI are a dynamic sector of the Romanian economy, and one that includes a wide variety of fields, sectors and sub-industries. The great volatility of the sector is due to an intensity of internal and external factors that affect copyright as a source of national income and wealth.

We draw five main conclusions from our analysis:

1. *Contribution to value added:* The economic contribution of CIs as defined and classified in four groups by the WIPO Guide (core, interdependent, partial and non-dedicated) was measured first using the share of total CI and of the four components in GDP.

The analysis revealed that CIs as a whole increased their share in GDP from 3.75 per cent in 2002 to 5.55 per cent in 2005. The core copyright industries increased their share from 2.06 per cent to 3.55 per cent, which means that they were the most prominent among all CIs, and the driving force behind the growth of the whole sector. The increase in the other industries' share was much smaller.

The share of CIs in GDP was greater than that of certain major industries in the Romanian economy, such as the manufacture of chemicals, the manufacture of rubber and plastic products, real estate activities, computers and related activities. This demonstrates the potential and importance of the CIs both now and in the future.

If we take into account the share of CIs in GDP, Romania matches the average of all countries. In the United States the indicator was 11.12 per cent in 2005 and 11.09 per cent in 2004 (*Copyright Industries in the U.S. Economy: The 2006 Report*). Both in Romania and elsewhere, an increase was noted in the CI share in GDP in the medium and long term, which reflected the growing contribution of these industries to economic and social growth in countries at different stages of development.

The average annual growth rate of GVA in CIs was 26.8 per cent over the period analyzed. The core industries were the most dynamic sector at 33.5 per cent, substantially exceeding the average annual growth rate of GDP. Only the ICT sector, which is itself closely related to the CI sector, registered comparable areas of growth throughout the period studied. The impressive dynamics of CIs over the period from 2002 to 2005 could be considered the reference for Romania's sustainable development.

It can be inferred from the above that CIs, and especially core CIs, have been highly dynamic sectors of the Romanian economy, but it should also be conceded that this was partly due to the low level of CI production and development at the outset.

2. Contribution to employment: Evidence that CIs contributed to an increase in Romanian employment is to be seen in the rise of this sector's share in average national employee numbers from 2.73 per cent in 2002 to 4.19 per cent in 2005. The numerical increase was 76,833 new jobs (full-time equivalent), with a very wide variety of skills gravitating towards cultural and artistic creativity development and dissemination.

The average number of employees in core CIs increased from 44,019 in 2002 to 101,801 in 2005, corresponding to a rise in percentage of the national total from 1.16 per cent to 2.36 per cent. CIs have significant job creation potential, especially for highly skilled and creative candidates who are willing to assimilate new cultural, artistic, scientific and technological skills.

In terms of their share of employment, the most important component industries of core CIs in 2005 were software publishing, other software consultancy and supply (24.33 per cent of the total number of CI employees), printing of newspapers and other printing n.e.c. (17.62 per cent), publishing of books, newspapers, journals and periodicals (12.96 per cent), advertising (14.36 per cent) and radio and television activities (12.27 per cent).

Advertising, theater and opera, press and literature were the most dynamic sectors with regard to employment.

Labor productivity in core CIs, in terms of GVA per employee, was 9,620 euros and 11,917 euros per employee in 2002 and 2005 respectively. This figure is more than ten times below that for developed countries (Canada, Germany, the United States and others).

Compared with the national average, profits per employee in 2005 were 1.53 times higher in total CIs, 1.79 times higher in core CIs and 2.27 times higher in interdependent CIs. This indicator, as well as labor productivity, fluctuated annually, although the trend was always upward.

3. Contribution to international trade. CIs are a sector that contributes significantly to the development of Romanian international trade.

The total volume of CI exports increased from 122.7 million euros in 2002 to 177.1 million euros in 2005. In the same period, core CI exports increased from 23.5 million euros to 55.6 million euros.

In relation to total Romanian exports, however, CI and core CI exports remained at rather modest levels, namely between 0.80 per cent and 0.94 per cent, which demonstrates their lack of competitiveness in international markets and the orientation of CI goods and services mainly towards the domestic market. Non-core industries (interdependent and partial) recorded much higher export volumes compared with core CIs, as the distribution and transport costs paid to dealers were extremely high compared with the actual value of the copyright goods exported.

Core CI exports exceeded the national total, which indicates a good prospective capacity for integration in international economic flows and globalization processes.

CI imports increased from 205.9 million euros in 2002 to 429.9 million euros in 2005, a rise of more than 100 per cent; the percentage share in total national imports was 1.08 per cent in 2002 and 1.31 per cent in 2005. Unlike CI exports, imports were dynamic, showing a consistently upward trend.

Core CI imports increased from 76.5 million euros in 2002 to 177.3 million euros in 2005; a rise of more than 130 per cent which exceeded the rise in total national imports (72 per cent in the period from 2002 to 2005). With imports growing faster than exports, the trade balance deficit of CIs worsened from -83.2 million euros in 2002 to -247.7 million euros in 2005. Romania's dependence on the import of copyright goods is increasing, which in turn impacts unfavorably on external debt in the medium and long term.

4. *The profitability of copyright-based industries* in the period from 2000 to 2005, expressed as the ratio of gross profit to turnover, revealed a reduction in the indicator from 8.90 per cent to 5.83 per cent. We regard core CIs as having recorded favorable levels of profitability for the whole period analyzed, even though they actually followed a downward trend. The fall in profitability can be explained not only by the increasing competition throughout the period, but also by the initially high level of the indicator, which was due to excess demand and only modest levels of production. The most profitable component industries of core CIs in 2005 were artistic and literary creation and interpretation (9.80 per cent), database activities (8.14 per cent), data processing (7.25 per cent), other software consultancy and supply (7.12 per cent) and reproduction of sound recordings (7.0 per cent).

5. *Salary level.* Compared with the national average, average monthly gross nominal salary levels were 1.28 times higher in all CIs, 1.49 times higher in core CIs and 1.26 times higher in interdependent industries. Salary levels in the partial and non-dedicated support industries were lower than the national average.

7.2 Recommendations

As a result of our analysis of the contribution of copyright-based industries to the Romanian economy, we can make several recommendations.

1. Considering the economic, social and cultural importance of CIs, a substantial improvement in regional and national statistics for core and non-core CIs is necessary, especially if we take the increasing impact of the information society and globalization into account.

A strategic approach to the CI sector would call for appropriate statistical tools and indicators to be set up and developed at national, regional and local levels.

An accurate and standardized statistical framework for CIs is necessary so that a strategy can be efficiently implemented and monitored. The national statistical system currently used in Romania is not suited to CI activities and occupations and does not produce the requisite data; international cooperation and a regular exchange of information in the CI field are of paramount importance if the theory is to be refined and better empirical information produced.

The improvement of statistics in Romania entails regular collection and collation of data on core, interdependent, partial and non-dedicated industries, in accordance with the WIPO classification and other international standards relating to gross output, value added, employment and foreign trade.

2. Bearing in mind that CIs have been considered important especially in the political and social fields, while their economic role has been analyzed, albeit to a somewhat lesser extent, in the national and international context, a special analysis of labor productivity, economic efficiency and profitability is called for. In order to measure the important economic and social impact of CIs and to have copyright efficiency better understood by Government decision-makers at all levels, an adequate and cohesive system of indicators has to be designed and calculated in comparative terms.

3. Sustainable development of the CI sector within the national economy requires coherent long-term strategic vision and policy tools with which to address the issues and the means at each stage of the process, taking into account the interconnections between the economic, social and environmental pillars of Romania's sustainable development.

This policy has to be the agreed outcome of a multi-stakeholder consultation based on a holistic approach to the interdependence of CIs and other sectors of the national economy, and also on consensus between Government, civil society and the private sector regarding the economic role of CI activities. This requires an institutionalized analytical and decision-making CI framework, which should be directed by the Government and based on a special legal instrumentation of copyright goods and services.

4. Labor in CIs has certain characteristic features regarding salary policies, level of education and professional specialization, type of employment (full-time or part-time, temporary or permanent), structure of employment with regard to age, socio-professional qualifications and so on. Research on these (including aspects of labor migration flow) with special reference to the CI sector would bring in the new elements and benchmarks necessary for decision-making in the field of employment.

5. The issue of access to capital markets and investment is a useful field of research which would increase the economic and social efficiency of CIs. The direct and indirect role of the State, which is involved through public-private partnerships, intangible resources and goods, subsidies and sponsorships granted for copyright activities with positive externalities, would have a beneficial effect on economic and social cohesion and inclusion. One particular feature of CIs is the fact that they enjoy public support and are partly administered by the State, which can intervene in its capacity as financier and employer. Moreover, new public management and governance are able to correct market failures in this field. Such failures are more specifically due to enforcement of the law of copyright and intellectual property, to the promotion of healthy, equitable social values and behavior and to environmental education. The problems of public-private partnerships in CIs are very specific and complex.

6. Bearing in mind that CIs are an important source of profit and revenue, and therefore a factor of economic growth, scientific and practical interest must also be focused on the intangible asset assessment methods in CI activity.

7. Estimating optimum copyright duration is a major economic efficiency issue, as it influences the choice of discount rates and the scale of cash flow.

8. Analysis of regional aspects of the contribution and development of CIs in relation to various enterprise categories assumes a special scientific and practical role, especially if we accept that CIs are becoming more and more integrated in the globalization process.

Given the wide diversity of CI structures, we recommend the adoption of specific approaches and methods for each sector and sub-sector involved in activities that have to do with the creation, production, distribution and use of copyright works.

Annexes

Annex 8.1

Contribution of the Cultural-Creative Sector and Other Industries to the European Economy

(% of GDP)

Country	Manufacture of food, drinks and tobacco	Manufacture of textile products and fabrics	Manuf. of chemicals	Manuf. of rubber and plastic products	Manuf. of machinery and equipment n.e.c.	Real estate	Computers and related activities	Cultural and creative sector
Austria	1.7	0.5	1.1	0.7	2.2	2.2	1.1	1.8
Belgium	2.1	0.8	3.5	0.7	0.9	1.0	1.2	2.6
Cyprus	2.7	0.4	0.5	0.3	0.2	...	0.6	0.8
Czech Rep.	2.8	1.0	1.3	1.5	2.3	1.4	1.2	2.3
Denmark	2.6	0.3	1.7	0.7	1.9	5.1	1.5	3.1
Estonia	2.2	1.9	0.6	0.6	0.6	2.8	0.7	2.4
Finland	1.5	0.3	1.1	0.7	2.1	1.8	1.5	3.1
France	1.9	0.4	1.6	0.7	1.0	1.8	1.3	3.4
Germany	1.6	0.3	1.9	0.9	2.8	2.6	1.4	2.5
Greece	...	...	...	...	...	...	...	1.0
Hungary	2.9	...	1.9	0.9	1.2	1.8	0.8	1.2
Ireland	5.3	0.2	11.5	0.3	0.5	1.2	1.7	1.7
Italy	1.5	1.3	1.2	0.7	2.1	1.0	1.2	2.3
Latvia	3.2	1.2	0.5	0.3	0.5	2.1	0.7	1.8
Lithuania	2.5	1.6	0.4	0.5	0.4	1.1	0.3	1.7
Luxembourg	1.0	0.9	0.4	2.0	0.6	...	1.2	0.6
Malta	...	...	...	...	...	...	...	0.2
Netherlands	2.2	0.2	1.7	0.4	1.0	2.3	1.4	2.7
Poland	4.7	0.8	1.4	0.9	1.2	1.3	0.6	1.2
Portugal	1.9	1.9	0.8	0.5	0.7	0.6	0.5	1.4
Slovakia	1.5	0.7	0.6	0.9	1.5	0.5	0.6	2.0
Slovenia	2.0	1.3	3.4	1.4	2.2	0.4	0.8	2.2
Spain	2.2	0.7	1.3	0.7	1.0	3.0	1.0	2.3
Sweden	...	...	...	...	...	4.0	2.2	2.4
United Kingdom	1.9	0.4	1.4	0.7	1.0	2.1	2.7	3.0
Bulgaria	2.2	2.0	1.1	0.4	1.3	0.4	0.3	1.2
Romania	1.9	2.1	0.8	0.5	1.0	0.5	0.5	1.4
Norway	1.7	0.1	0.8	0.2	0.8	2.7	1.3	3.2
Iceland	...	...	...	...	...	...	...	0.7

Source: *The Economy of Culture in Europe, Study prepared for the European Commission (Directorate General for Education and Culture), October 2006, p.68*

Annex 8.2

Change in the Cultural and Creative Sector's Turnover and GVA Increase

%

Country	Average growth of turnover	GVA Growth
Austria	5.4	2.8
Belgium	5.2	7.7
Czech Republic	15.5	56.0
Denmark	2.7	-1.9
Estonia	11.5	9.1
Finland	7.1	11.1
France	6.7	7.1
Germany	4.9	6.6
Greece	5.4	4.4
Hungary	17.1	7.6
Ireland	7.7	8.8
Italy	5.3	7.3
Latvia	7.7	17.0
Lithuania	5.1	67.8
Luxembourg	2.9	...
Malta	0.1	...
Netherlands	5.0	...
Poland	6.1	13.0
Portugal	10.6	6.3
Slovakia	3.9	15.5
Slovenia	17.9	5.4
Spain	10.5	9.0
Sweden	7.8	2.6
UK	6.6	1.7
Bulgaria	13.8	...
Romania	20.2	29.0
Norway	4.8	3.8
Iceland	8.3	4.1
Total EU-15	5.4	6.6
Total 30 Countries	8.1	12.3

Source: *The Economy of Culture in Europe, Study prepared for the European Commission (Directorate General for Education and Culture), October 2006, p.69*

Annex 8.3

GVA per Employee in Romanian Core Copyright Industries, 2002-2005

Industry	Euro			
	2002	2003	2004	2005
Book publishing	10,019	8,258	8,239	11,095
Newspaper publishing	3,739	3,869	4,500	5,837
Publishing of journals and periodicals	6,701	9,282	9,305	11,339
Publishing of sound recordings	4,942	7,882	5,643	8,458
Other publishing	6,327	4,671	6,488	9,170
Printing of newspapers	24,112	8,610	10,004	12,807
Printing n.e.c.	5,286	8,954	9,052	11,278
Bookbinding	3,861	3,603	3,287	4,612
Pre-press activities	9,785	7,312	7,642	8,915
Ancillary activities related to printing	5,350	5,239	5,313	5,496
Reproduction of sound recordings	7,392	5,654	5,572	8,005
Reproduction of video recordings	25,018	6,574	4,829	5,205
Reproduction of communication on computers	33,545	10,210	13,923	12,549
Software publishing	12,859	11,653	10,786	13,080
Other software consultancy and supply	...	14,224	11,165	13,278
Data processing	6,546	6,253	6,695	7,336
Database activities	10,809	7,872	7,685	8,113
Advertising	8,297	8,831	9,012	11,596
Photographic activities	3,131	2,746	3,187	3,955
Secretarial and translation activities	5,444	...	...	...
Activities of professional organizations	3,730	1,159	2,573	3,292
Motion picture and video production	8,999	6,455	11,755	11,745
Motion picture and video distribution	7,062	3,487	17,336	8,332
Motion picture projection	1,725	15,553	5,796	9,099
Radio and television activities	13,026	13,357	16,133	20,537
Artistic and literary creation and interpretation	6,103	9,031	30,027	7,630
Operation of arts facilities	14,802	5,180	2,605	2,132
Fair and amusement park activities	3,071	4,342	3,174	4,031
Other entertainment activities n.e.c.	...	3,991	4,760	5,460
News agency activities	3,616	5,336	12,542	6,194
Library and archives activities	9,099	3,772	7,750	8,835
Other recreational activities n.e.c.	3,754	3,563	3,726	4,188
Total Core Industries	9,512	9,155	9,824	11,868
Total National	5,357	5,275	6,386	7,887

Source: Own calculations based on Ministry of Finance data

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The Economic Contribution of Copyright-Based Industries in Russia



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Introduction

With societal development and the growth in the importance of information, intellectual property, including copyright, has gradually become firmly established as one of the most valuable intangible assets of the economy of the information society. It forms the basis for the development of many industries, ensuring growth in value added, jobs and foreign trade.

Looking at the economic impact of copyright on the economy on a wider scale, its role should be noted in the increase of wealth, growth and economic development, as these categories are directly connected with the use of creative potential.

The analysis presented helps to underline the distinctive features of copyright and to evaluate the degree of its influence on the economy of the Russian Federation.

This research was based on the methodology elaborated by the World Intellectual Property Organization (WIPO) in the *Guide on Surveying the Economic Contribution of the Copyright-Based Industries*.¹

Many countries carry out regular research into the contribution of the copyright-based sector of the economy, e.g. Finland, the Netherlands, the UK and the US.

According to statistics for 2004, the contribution to the economy of the core copyright industries equaled: 4.8 per cent of gross domestic product (GDP) in Finland, 5.8 per cent in the Netherlands and 7.75 per cent in the US. In Russia, according to our research, this indicator was equal to 6.06 per cent of GDP. In spite of the fact that some of the methods used differ in the scope of research, the indicators studied and the research mechanism applied, all the results demonstrate the following trends:

- a significant and increasing contribution to the creation of value added and new jobs, which often proved to be higher than initially expected;
- dynamic development of the cultural and information sectors, which was usually higher than in other sectors of the economy.

The above trends have also been observed in Russia. However, because this is the first time such research has been undertaken in Russia, it does not reflect the dynamics of the contribution indicators in copyright-protected industries over a period of time.

The study of the economic significance of copyright was carried out by the Russian State Institute of Intellectual Property on the instructions of the Federal Service for Intellectual Property, Patents and Trademarks in the framework of the agreement between the Federal Service and WIPO.

The organizations which participated in the research were the Russian Copyright Society, the State Unitary Enterprise (Rus.GUP), INFORMZASHCHITA and the Russian Federal Service for Statistics (Rosstat).

The authors of the interim reports and the final report were as follows:

- Ekaterina V. Ananyeva, Deputy Chair of the Board, Head of the Contract and Law Department of the Russian Copyright Society;

¹ Guide on Surveying the Economic Contribution of the Copyright-Based Industries, WIPO, Geneva, 2003.

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- Konstantin B. Leontiev, Ph.D. (Law), Assistant Professor of the Copyright and Private Rights Department, Deputy Rector (Research) of the Russian State Institute of Intellectual Property;
- Valentina V. Orlova, Doctor of Law, Professor of the Copyright and Private Rights Department, Deputy Rector (Research) of the Russian State Institute of Intellectual Property.

Major assistance in the preparation of the present report was provided by the translators: Z. Kh. Albegonov and E. A. Moiseeva, Ph.D. (Linguistics). The data used in the analysis was from the official statistics of the Federal Service for Statistics (Rosstat) for 2004 and previous years.

Within the scope of state statistics gathering there has never been a comprehensive evaluation of the GDP generated by the copyright-based industries. At the same time, it was not possible to obtain all the relevant data for evaluating the influence of copyright on the Russian economy for the present research from the results of statistical observation.

Therefore, some figures may seem to be lower than they really are, owing to underestimated data on some groups of enterprises which use copyright in their business activities.

Section I. Economic Significance of Copyright and Related Rights Material

General Characteristics of the Methodology Applied

In the course of our research, the economic significance of the respective industries for the Russian economy was studied, along the following basic parameters:

- evaluation of the volume of production and sales of goods and services in relation to the countrywide total;
- contribution to GDP;
- number of employees in the respective industries and their share in the total employment;
- contribution of industries to foreign trade (imports and exports).

All industries were grouped according to their copyright factor in the four specific areas.

Calculations were made for each group for all the parameters. Data on exports and imports for the partial copyright and the non-dedicated support industries were not studied, as there are no statistics for such data in view of their limited importance.

Certain statistical indicators, including Gross Value Added (GVA), are provided only for the larger groups, so our calculations were made on the basis of traditional correlation between turnover, output and gross value added in groups taken as a whole. These correlations were then applied to each industry (sub-sector).

Another feature of our statistical observations was the separation between the sectors covering large and medium-sized enterprises and small enterprises. Thus the data were computed separately for the two sectors, followed by an overall figure. For the interdependent industries (support industries) the evaluation of results for small enterprises was deliberately omitted because of their insignificance in this sector of production.

All calculations are given in basic prices without applying price deflators as this is the first time such research has been carried out in Russia. The data analyzed refer to 2004. The analysis was carried out for the most significant natural indicators of product manufacturing.

The methodology of the present research was based on the principles and approach laid down by WIPO as a foundation for a series of similar studies, carried out under its auspices in Canada, Hungary, Latvia, Singapore and the US.

Beside the main methodological provisions set out in the *Guide on Surveying the Economic Contribution of the Copyright-Based Industries*,² the methods developed in the course of the above studies were also used in the present work.

In particular, evaluation of the role of the core, interdependent, partial and non-dedicated support industries were used in the present research.

² WIPO, Geneva, 2003.

To analyze the GDP, as this indicator is present in the larger sectors of the national economy and types of businesses taken as a whole (without being broken down into classes and subclasses), we used the method of recalculating output figures for individual classes and sub-industries taking account of the actual economic efficiency of manufacturing different kinds of products and services and the wider measures (for corresponding industries) of the weight of material and equal costs, which is similar to interim consumption in GDP calculations in 2004. This is why it was not possible to provide detailed data on the generation of GDP for all types, classes and sub-classes of economic activities.

Considering the fact that it was impossible to analyze the dynamics of a whole set of indicators needed to calculate the specific weight values of the economic significance of certain industries, activities and types of production, many of which were not covered by official statistics, it was decided and agreed with WIPO to use the specific weight values of the economic significance of certain industries, activities and production types elaborated in the course of similar research carried out in other countries. The most complete description of the above-mentioned specific weight values was provided in the Singapore study. That is why these values were taken as a basis for calculating the share of turnover, employment and GDP generated by the industries and sectors of the economy related to copyright to a variable degree.

Instead of the factors given in the table, the values of the factors used underwent significant changes, namely:

Clothing manufacture	0.40
Footwear manufacture	0.40
Textiles	0.40
Wholesale and retail of textiles and other associated goods	0.40
Communications	5.80

other factors adjusted to Russian conditions were used:

Clothing manufacture	4.50
Footwear manufacture	4.50
Textiles	4.50
Wholesale and retail of textiles and other associated goods	4.50
Communications	40.60

Substantiation for these values is provided further in this publication.

Section II. Evaluation of the Influence of Copyright on the Russian Economy

With the aim of ensuring transparency of the groupings used in this survey and also to ascertain their compliance with those used in the surveys conducted under the WIPO methodology, tables of comparisons are provided on pages 310 to 312.

The economic analysis carried out within the framework of the present study and aimed at evaluating the actual contribution of each group of copyright-based industries, allows us to draw certain conclusions.

In 2004, the volume of production, sales of products and services in this group of industries in Russia was equal to 8.66 per cent of the total volume in the economy as a whole. At the same time the total share of the copyright-based industries in Russia was 7.03 per cent.

The contribution of the core copyright industries was taken to constitute 100 per cent, since the industries in this group cannot function without copyrighted material. This is why, in relation to statistical data on employment, turnover and GDP generation, the correlation factors 1.0 (100 per cent) were used.

The copyright-based contribution in the second group of copyright-based industries (interdependent industries) amounted to a smaller percentage as for the primary group, because these industries are not completely dependent on copyright. The contribution of the second group could not be taken to be 100 per cent, so correction factors ranging from 20 per cent to 36 per cent were applied.

In the third group of industries, a relatively small part of the output was related to copyrighted materials, and they typically included a significant service component. This is why to calculate the influence of copyright on the data evaluation in this group of industries we used correction factors ranging from 0.40 per cent to 42 per cent depending on the degree of the influence of copyright on production and sales.

Copyright in the fourth group of industries (non-dedicated support industries) affects only a small part of their business. However, the total volume of goods and services in this sector can be quite large and, even considering the correction factors applied, this group of industries makes a significant contribution to economic development based on copyright. At the same time, the wholesale and retail trade, not being directly connected with copyright, significantly affects the promotion of products providing access to copyright materials. It is for this reason that for the purposes of the present research we chose only those sectors of the wholesale and retail trade which ensure the promotion of products in core and interdependent industries to the end user.

2.1. General Evaluation of the Main Indicators of the Russian Economy

2.1.1. Principal Indicators Showing Economic Development in the Russian Federation

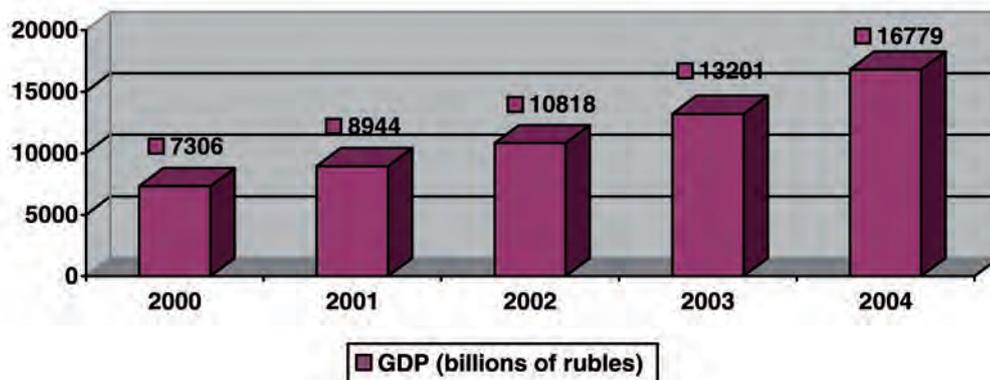
The level of economic development of a country can often be generalized on the basis of a few principal indicators. For the purposes of the present research the following indicators were included in the analysis:

- average annual number of workers employed in the economy (in thousands of workers);
- total GDP (billions of rubles);
- turnover of foreign trade with countries outside the CIS (billions of US dollars);
- turnover of foreign trade with CIS countries (billions of US dollars).

2.1.2. General Outline of the Growth of GDP

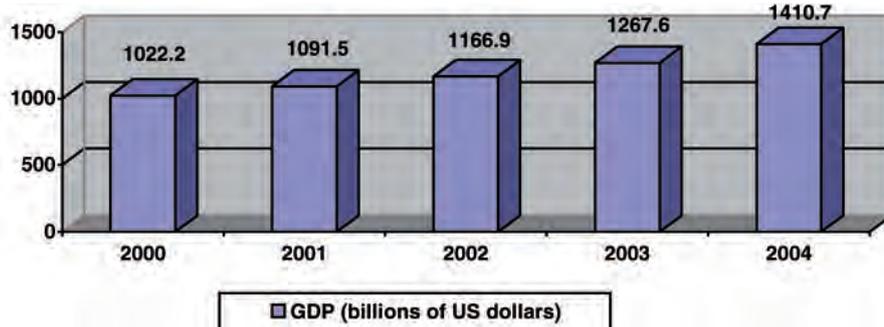
In 2004, national GDP amounted to 16,779 billion rubles (1,410.7 billion US dollars) and exceeded the level of 2000 by practically 2.3 times.

Figure 2.1.2.1. Growth in GDP in the Russian Federation in 2000-2004 (billions of rubles)



However, the comparison with the GDP calculated in US dollars showed that the increase of this indicator, adjusted for the purchasing power of the ruble to the US dollar, accounted for no more than 40 per cent.

Figure 2.1.2.2. Growth in GDP in the Russian Federation in 2000-2004 (billions of US dollars)



The industry composition of GDP was calculated according to types of business, which corresponds to the international classification.

From 2002 to 2005 the volume of GDP practically doubled and covered such industries as manufacturing, construction, transport and communications, education, provision of other utilities, social services and some others.

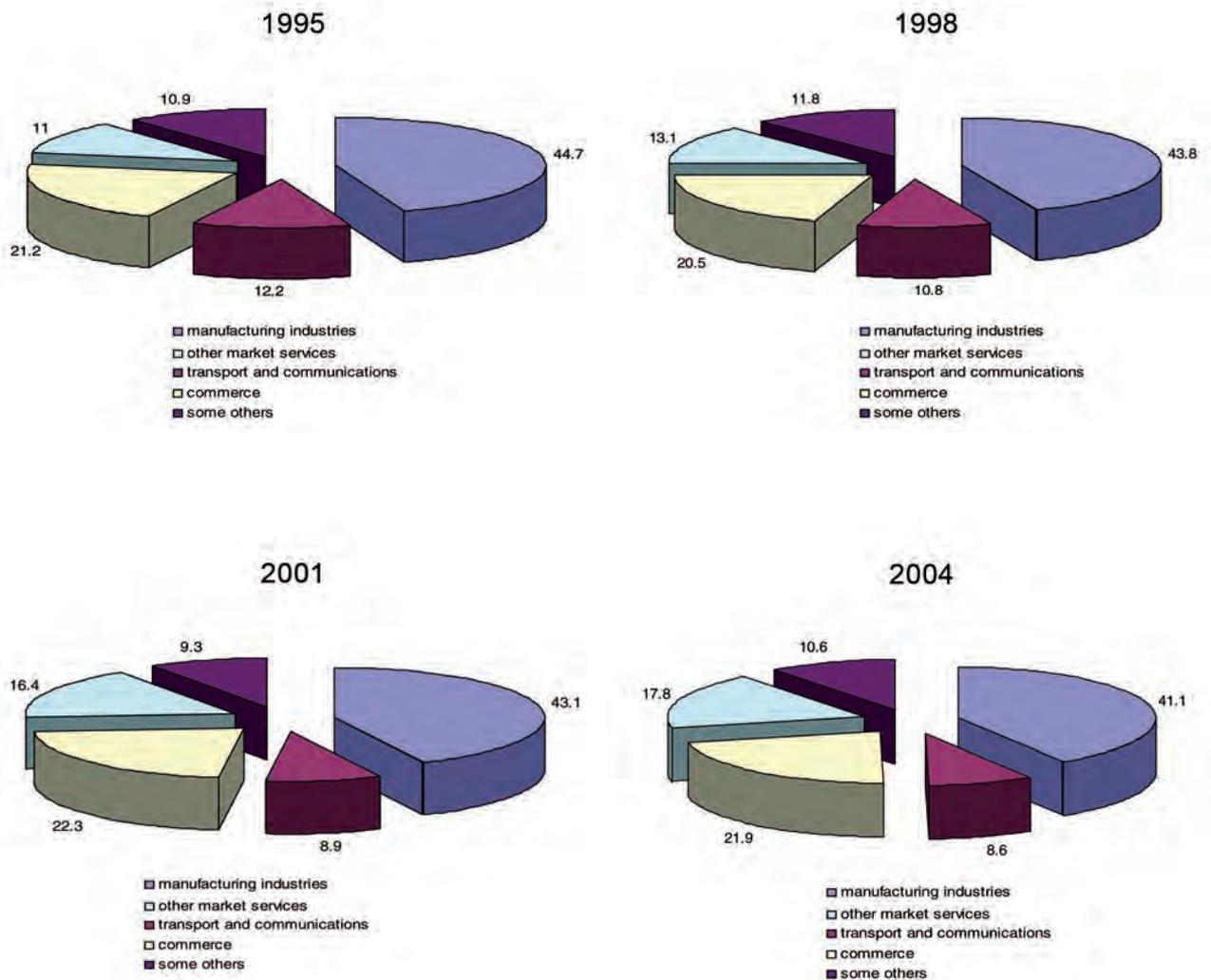
Until now, statistical observation has not classified such industries as a subject for individual consideration; however, the trends revealed suggested that it was other, non-traditional industries that have emerged as a result of introducing market mechanisms and general intellectualization of economic activities and which will henceforth make a major contribution to the development of the Russian economy.

In comparison with 1995, the contribution of services to GDP grew from 51.6 per cent to 52.4 per cent in 2004, with the share of the manufacturing industries equaling 26 per cent in 1995 and 24.9 per cent in 2004.

The analysis of the changes having taken place in the structure of GDP since 2000 is illustrated in figure 2.1.2.2. The structure of GDP was calculated as a percentage of the amount of GDP in basic prices, i.e. without taking into account indirectly measurable intermediary financial services.

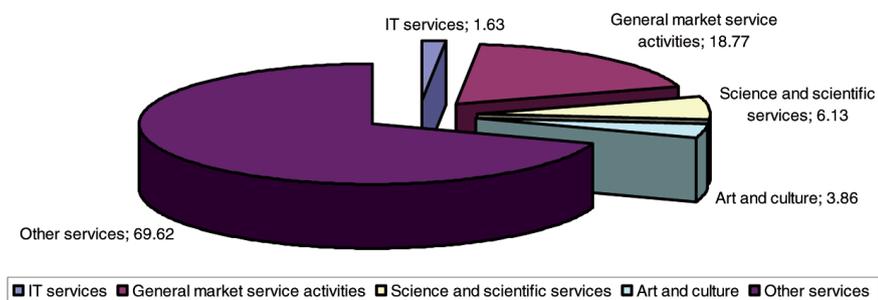
The figure below shows that the share of manufactured products shrank from 44.7 per cent to 41 per cent; transport and communications from 12.2 per cent to 8.6 per cent; non-market services from 10.9 per cent to 10.6 per cent. Against this background the share of other market services gradually increased from 10.9 per cent in 1995 to 17.8 per cent in 2004.

Figure 2.1.2.3. Change in the Structure of GDP in Basic Prices (without intermediate financial services) by Industry (%) (1995, 1998, 2001 and 2004)



The main contribution to GDP in 2004 was made by the service industries, especially trade and catering.

Figure 2.1.2.4. Contribution of GVA in the Other Market Services Sector in 2004 (% of total)



In figure 2.1.2.4 we can see that, in 2004, in the total volume of other market services the following acquired great significance: general commercial services, science and science services, art and culture and IT services.

2.1.3. Analysis of Employment in Russia

The average annual number of workers in the economy as a whole changed little in the period between 2000 and 2004. The actual increase in the average annual number of employees did not exceed one per cent.

Thus, the average annual number of workers in the manufacturing industry and agriculture was steadily decreasing; in science and science services it remained practically unchanged (amounting to 0.8 per cent for the whole period), and in the other services industries it was increasing. The most noticeable growth was observed in trade and catering (+20.32 per cent), art and culture (+12.94 per cent) and communications (+5.8 per cent).

Figure 2.1.3.1 contains the data on the structure of the average annual number of workers in the Russian economy in 2004, with amendments made in 2005 in the course of conversion to the new system of statistics, namely by types of business activities.

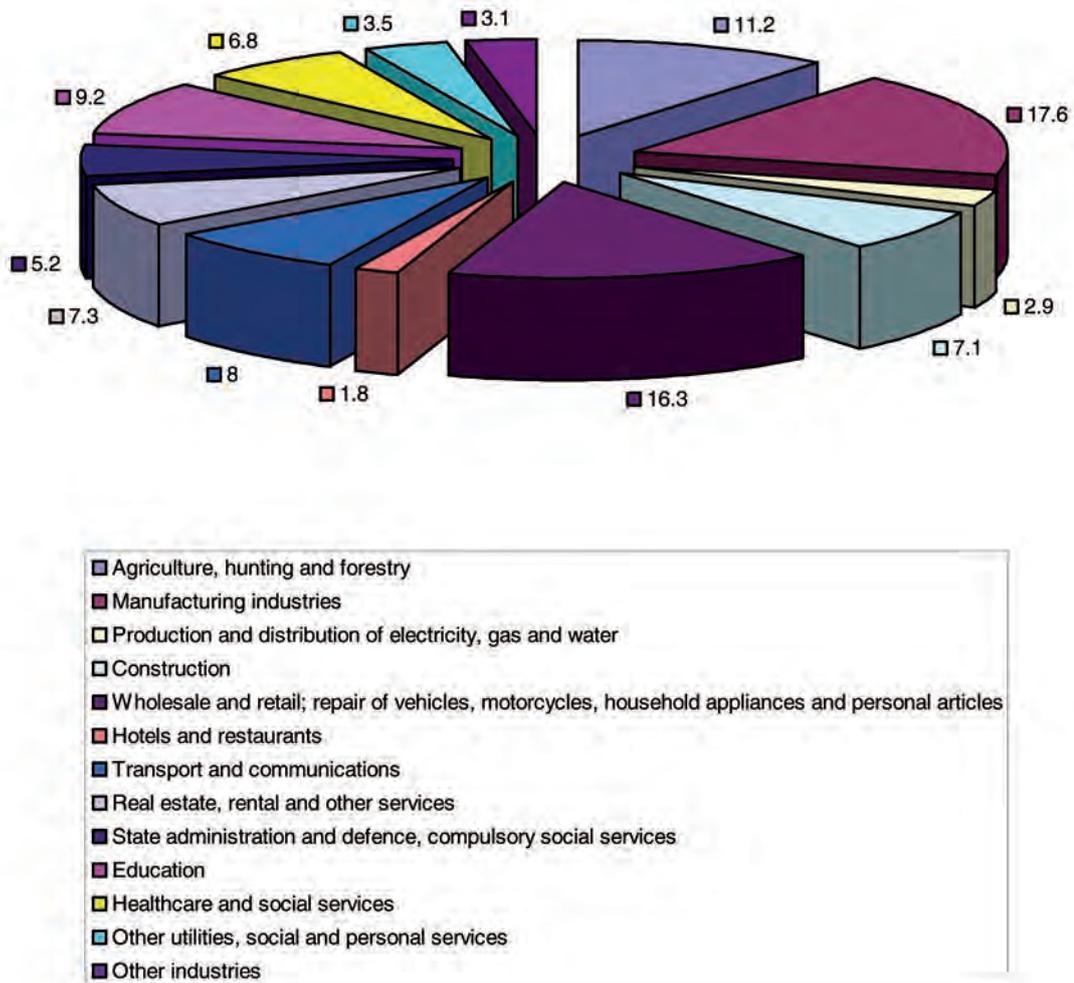
The structure of employment is projected as a pie chart in figure 2.1.3.1. It is evident that the following traditionally labor-intensive industries predominate: agriculture, hunting and forestry (11.2 per cent); the manufacturing industries (17.6 per cent); the wholesale and retail trade (16.3 per cent).

A less significant share, but still within the range of 6 to 10 per cent, includes such industries as construction, transport and communications, real estate operations, education, healthcare and provision of other utilities, social and personal services.

In the employment structure by branch of the economy, art and culture in 2004 came to 2 per cent; science and science services 1.8 per cent; education more than 9 per cent. In 2000 the share of these sectors was 1.7 per cent; 1.86 per cent and 9.1 per cent respectively.

On the basis of the data provided, it can be inferred that in the period from 2000 to 2004 there was a certain progression (+ 0.3 per cent) in the growth of employment in art and culture, against a stable share for science and science services and education.

Figure 2.1.3.1. Employment Structure in 2004



2.1.4. Analysis of the Number of Enterprises and Organizations in the Russian Economy

An important aspect characterizing general changes in the economic situation and structural trends in the economy was the number of enterprises and organizations, as well as changes in their composition.

From 1996 to 2004 the total number of large and medium-sized enterprises increased significantly by more than 1.8 times.

Where a leap in growth took place (by between 1.9 and 2.7 times), the number of enterprises and organizations grew sharply in such sectors as transport, wholesale and retail, education, art and culture, and IT services. At the same time the share of these industries in the total number of enterprises remained the same or grew only slightly.

The industry in which major growth in the number of enterprises took place (by 93 times) was communications, the share of this sector having increased from 0.009 per cent to 0.5 per cent.

As a result, in 2004 the large and medium-sized enterprise sector developed and its make-up is shown in figure 2.1.4.1.

However, as a result of market reforms in Russia, another important sector of the economy was formed and showed significant growth year on year: small enterprises. These small enterprises not only led to an increase in the total number of enterprises at the time of this study they accounted for no less than one quarter of the total but also exerted a noticeable influence upon the industry composition of enterprises and organizations.

The above data are illustrated in figure 2.1.4.2. Changes in the number of small enterprises and their industrial affiliation were not as dramatic as those for large and medium-sized enterprises. The number of small enterprises in science and education fell noticeably, i.e. more than double; in the manufacturing industry their number fell slightly (only by 0.03 per cent); in the other industries their number grew: by 1.23 times in wholesale and retail ; 1.43 times in art and culture and IT services; 1.5 to 1.9 times in transport, agriculture and communications. Maximum growth in the number of small enterprises was observed in communications.

Figure 2.1.4.1. Number of Large and Medium-Sized Enterprises by Sector in 1996 and 2004 (% of total)

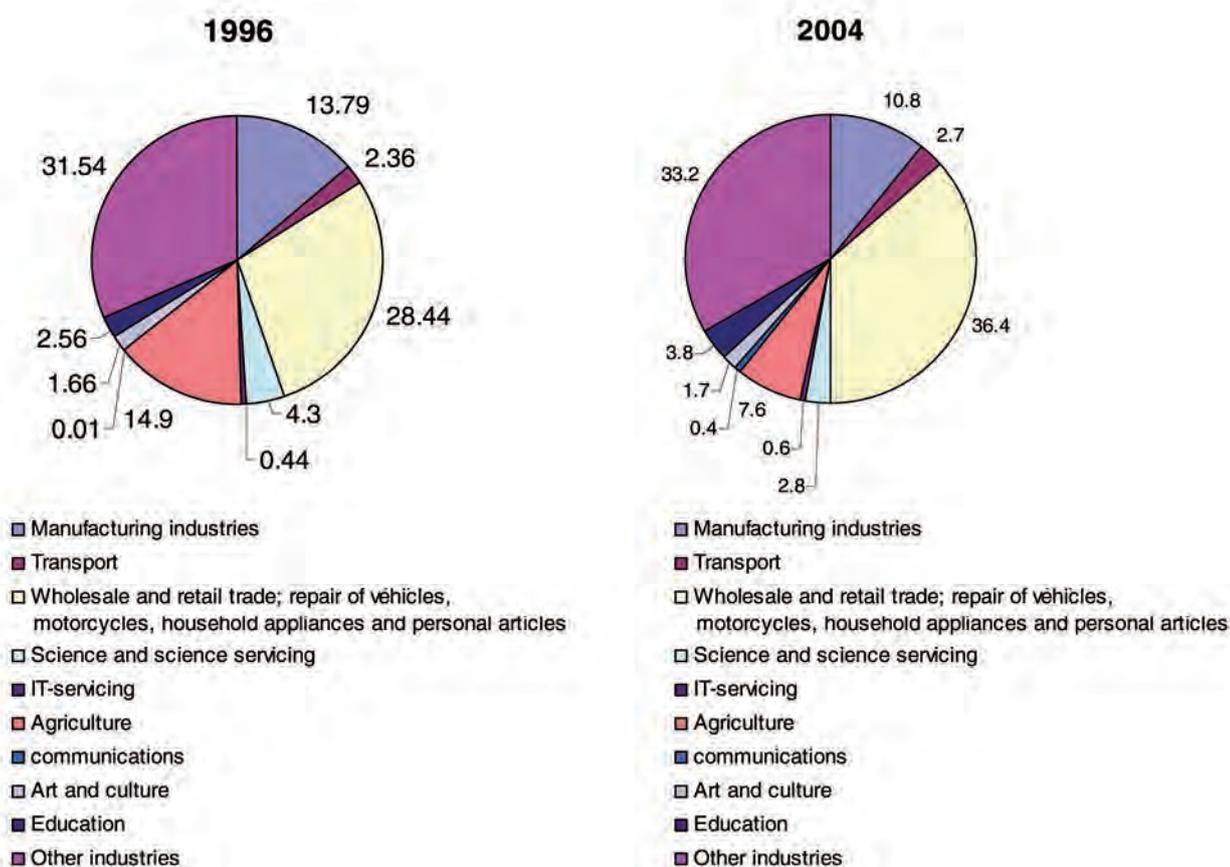
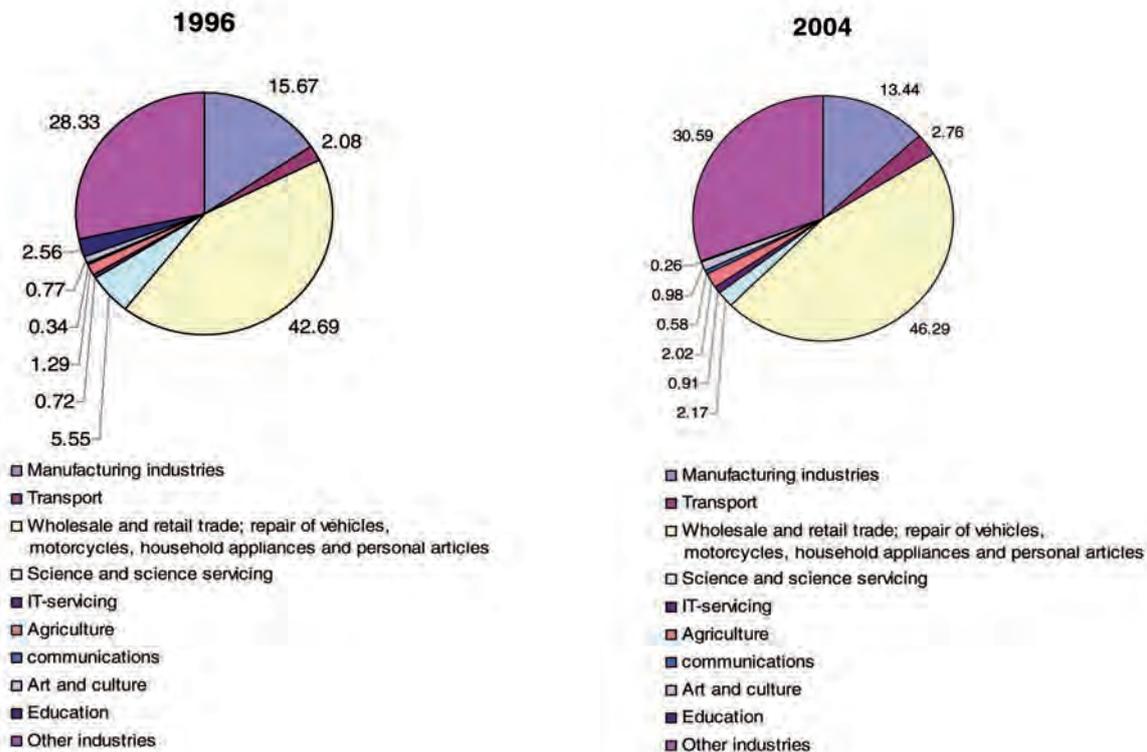


Figure 2.1.4.2. Number of Small Enterprises by Sector in 1996 and 2004 (% of total)



Thus, changes in the number of enterprises and organizations also demonstrated the increasing importance of branches based on the exploitation of materials protected by copyright and related rights.

2.1.5. Analysis of Household Consumer Spending

Of no small importance for the research was the study of household expenditures. Data on the structure of such expenditures obtained by Rosstat for 2000-2004 as a result of random surveys are presented in table 2.1.5.1 and in figure 2.1.5.1.

Table 2.1.5.1. Structure of Household Consumer Spending (% of total)

Indicator	2000	2001	2002	2003	2004
Total consumer expenditure	100	100	100	100	100
including:					
Purchase of foodstuffs for home consumption	47.6	45.9	41.7	37.7	36.0
Purchase of radios and televisions, other goods for leisure and entertainment	3.2	3.2	3.4	4.4	4.6
Purchase of vehicles	2.8	3.6	4.6	4.3	5.1
Expenditure on cultural activities	0.5	1.0	1.1	1.4	1.7
Expenditure on communications	1.2	1.2	1.5	1.9	2.2
Expenditure on education	1.2	1.4	1.7	1.6	2.0

The data shows that from 2000 to 2004 there was a significant decrease in household spending on food products leading, against the general growth in real earnings, to the growth in direct or indirect expenditure connected with copyright and related rights.

It can be seen that these expenditures increased substantially between 2000 and 2004.

Figure 2.1.5.1. Breakdown of Household Spending in 2000 and 2004 (% of total)

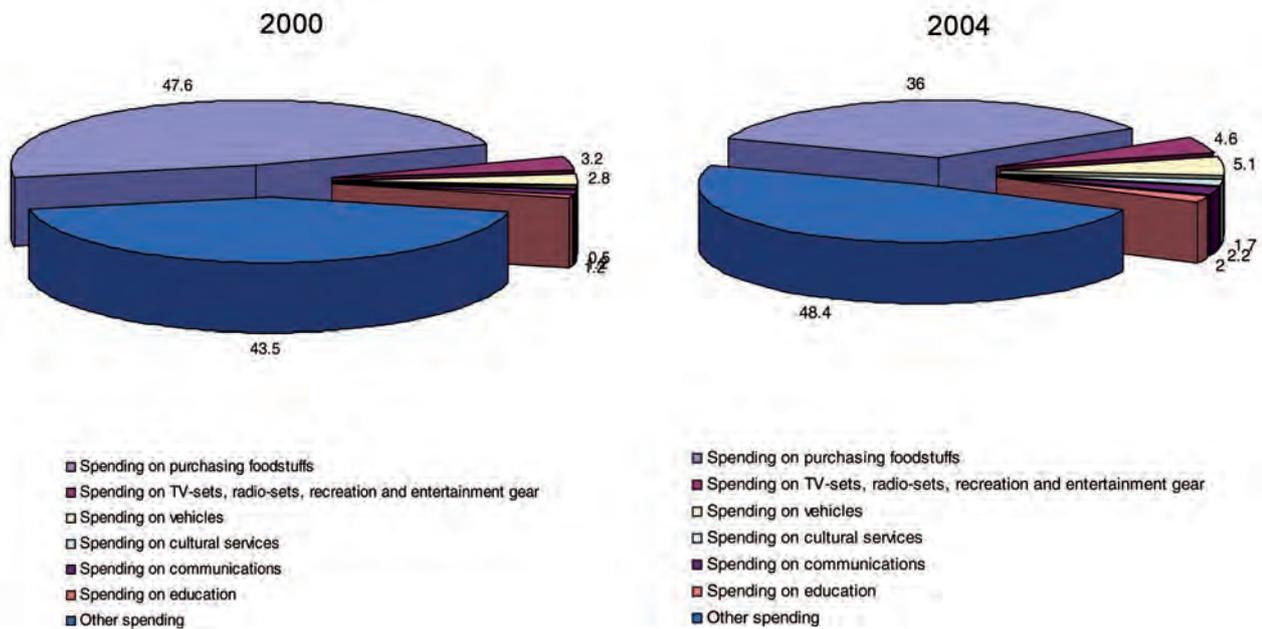


Table 2.1.5.2. Breakdown of Actual Household Consumption of Individual Types of Goods and Services in 2002 (at 2004 prices, billions of units of national currency)

Type of consumption	Russia		Germany		Finland		France		UK		Sweden	
	total	% of total	total	% of total	total	% of total						
Actual household consumption	6,404.3	100	1,479.6	100	90.8	100	1,057.1	100	819.3	100	1,601.9	100
Foodstuffs and non-alcoholic beverages	1,700.5	26.5	143.1	9.7	8.8	9.7	122.5	11.6	61.2	7.5	138.9	8.7
Alcohol, tobacco, drugs	463.1	7.2	47.2	3.2	4.0	4.4	28.5	2.7	26.0	3.2	45.7	2.9
Clothing and footwear	679.8	10.6	71.7	4.8	3.1	3.4	39.3	3.7	39.3	4.8	62.7	3.9
Household goods and electric appliances	285.6	4.5	79.2	5.4	3.3	3.6	51.2	4.8	40.0	4.9	55.7	3.5
Transport	581.1	9.1	169.5	11.4	8.4	9.3	125.1	11.8	94.9	11.6	143.1	8.9
Communications	196.9	3.1	33.1	2.2	2.3	2.5	19.6	1.9	14.7	1.8	36.1	2.3
Leisure and culture	305.4	4.8	119.1	8.1	8.8	9.7	86.3	8.2	86.6	10.6	161.3	10.1
Education	479.7	7.5	83.7	5.7	7.6	8.4	73.2	6.9	45.7	5.6	160.4	10.0
Restaurants and hotels	146.8	2.3	55.8	3.8	4.4	4.8	64.4	6.1	76.7	9.4	56.4	3.5
Other expenditures		24.4		45.7		44.2		42.3		40.6		46.2

Expenditures on consumer durables (furniture, carpets, housing), clothing, textiles and footwear, as well as bank deposits were included in "other expenditures."

It is clear from this table that expenditure on food products in the Russian Federation was practically two and a half times higher than similar indicators of specific weight of similar expenditure in other countries. As a result, the structure of consumer expenditure of households in Russia differed materially from other relevant data. In the above table the section "other expenditures" includes the following:

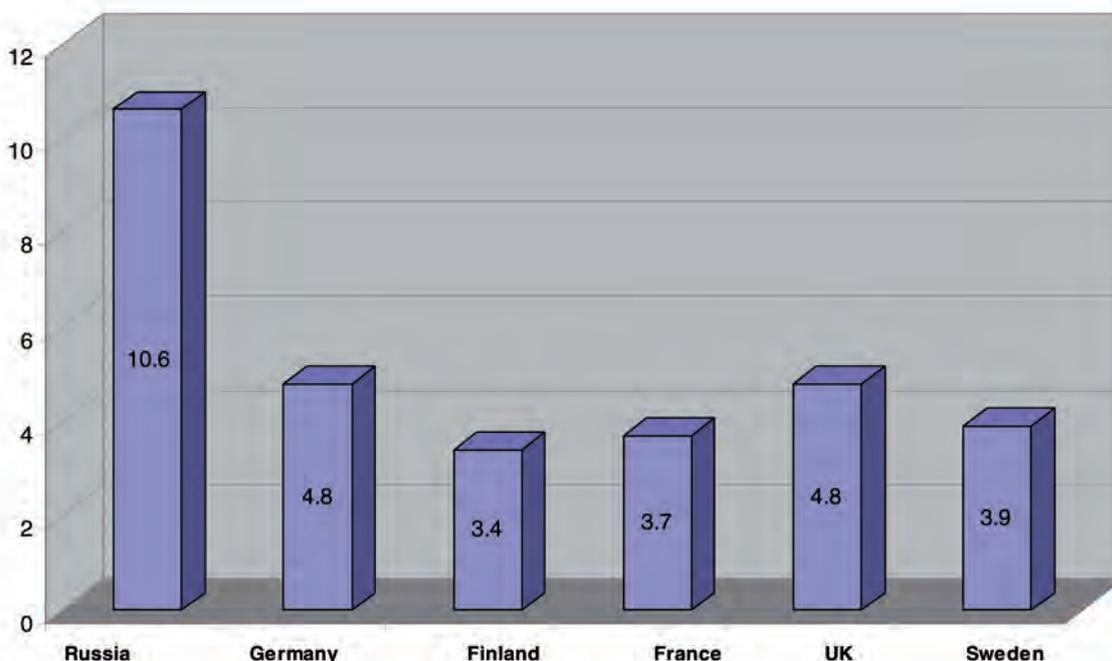
- housing and utility services, water, electricity, other types of fuel;
- spending on healthcare;
- other purchases, including net purchases abroad.

Figure 2.1.5.2. shows the share of spending on clothing and footwear in the total expenditure of households in Russia (10.8 per cent) compared with other countries (Finland – 3.4 per cent; France – 3.7 per cent, Germany – 4.8 per cent, Sweden – 3.9 per cent and the UK– 4.8 per cent). Thus, the share of spending on clothing and footwear in Russia equaled 225 per cent of the European average (4.8 per cent).

Comparing the data shows that the weight of spending on clothing and footwear was practically double that of similar indicators in the developed European countries. It is apparent that Russian conditions result in higher prices for this particular class of commodity which, in turn, results in a higher contribution to GDP from the industries manufacturing and selling these commodities.

Taking account of this, the correction factor establishing the share of a particular industry output in the generation of GDP used in the calculations should be adjusted for the industries related to the manufacture and sale of clothing, footwear and other similar commodities, for example, textiles. According to the WIPO methodology the correction factor used is equal to 0.40. After adjustment by 225 per cent, this factor should amount to 0.90.

Figure 2.1.5.2. Comparison of the Share of Expenditure on Clothing and Footwear with Total Household Expenditure (%)



However, this adjustment seems to be insufficient, because the comparison was made on the basis of final household expenditure in national currencies, without taking into consideration their purchasing power parity.

Based on the purchasing power parity ratio of the ruble and other national currencies to the US dollar, we can define the following correlation between the total volumes of GDP: Finland – 106; France – 104; Germany – 104; Russia – 22; the UK – 105; the US – 100.

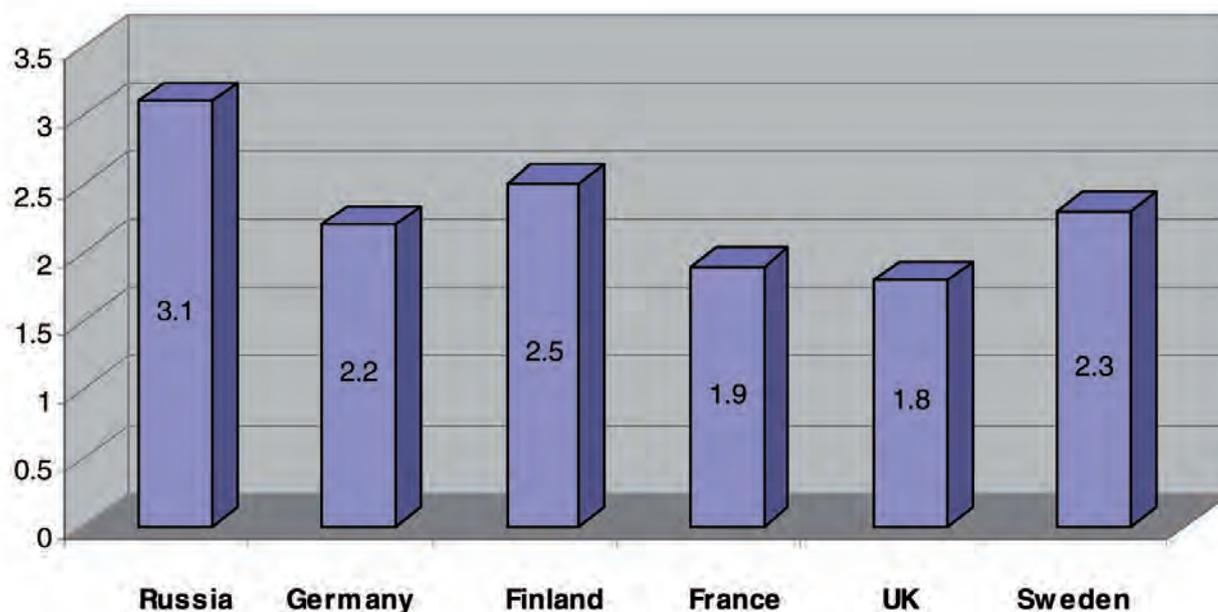
Thus we can assume that the total spending by household in Russia was equal to approximately one-fifth of the corresponding indicators for European countries. This means that to be able to compare the data, the GDP correction factor needs to be adjusted upwards by about five times. As a result of this adjustment the correction factor magnitude will be 4.5. This value more accurately reflects the actual contribution of a given industry to GDP and the influence of the price factors expressed in excess of the profitability standard normal for European countries in industries related to manufacture and sales of clothing, footwear and textiles.

Similar differences were demonstrated in spending on communications services.

On average, the share of spending on communications services in Russia exceeded the average European indicator by 1.4 times. This cannot be explained by the high volume of services provided: the causal factor was also the higher rates of profitability in this industry in Russia and, as a consequence, higher average prices for its services and a higher contribution to GDP.

In a similar manner it was possible to recalculate the ratio reflecting the communication industry's contribution to GDP as follows: $5.8 * 1.4 * 5 = 40.6$.

Figure 2.1.5.3. Share of Expenditure on Communications Services in Total Household Consumption (%)



When applied to Russian conditions, the following adjusted correction factors should be used:

Clothing manufacture	4.50
Footwear manufacture	4.50
Manufacture of textiles and other goods	4.50
Wholesale and retail in clothing, footwear, textiles and other similar goods	4.50
Communications	40.60

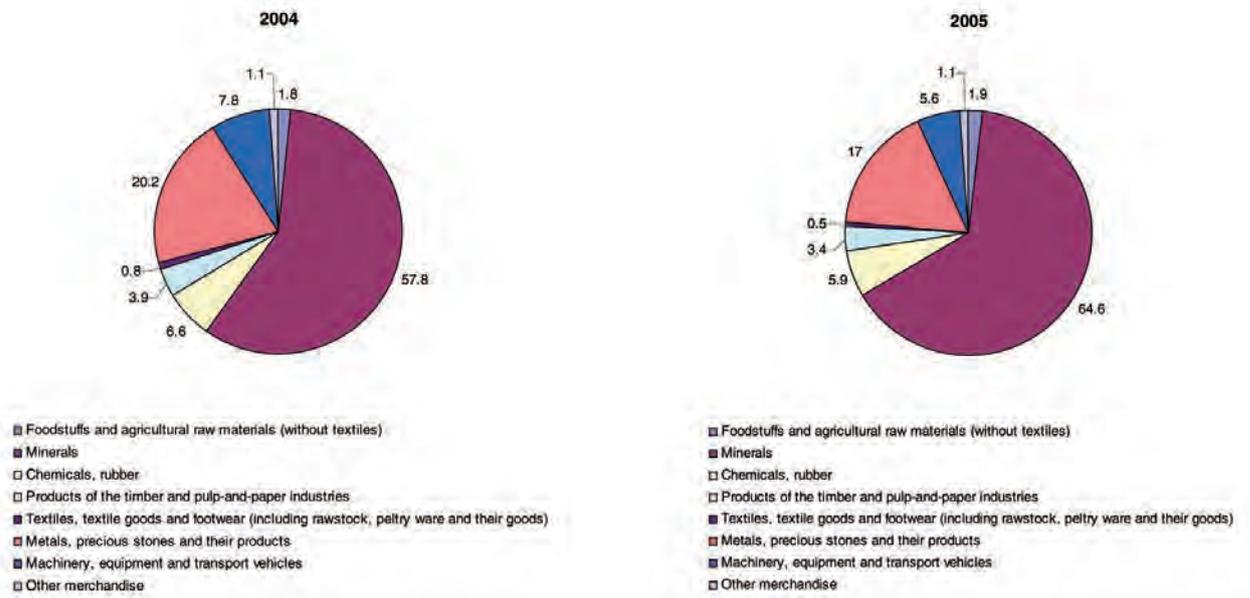
2.1.6. Analysis of Foreign Trade Operations in Russia

Data on the indicators characterizing foreign trade for the period from 1995 to 2005 are given in figure 2.1.6.1 and show not only substantial changes in the volume of exports and imports, but also considerable changes to the export and import structure.

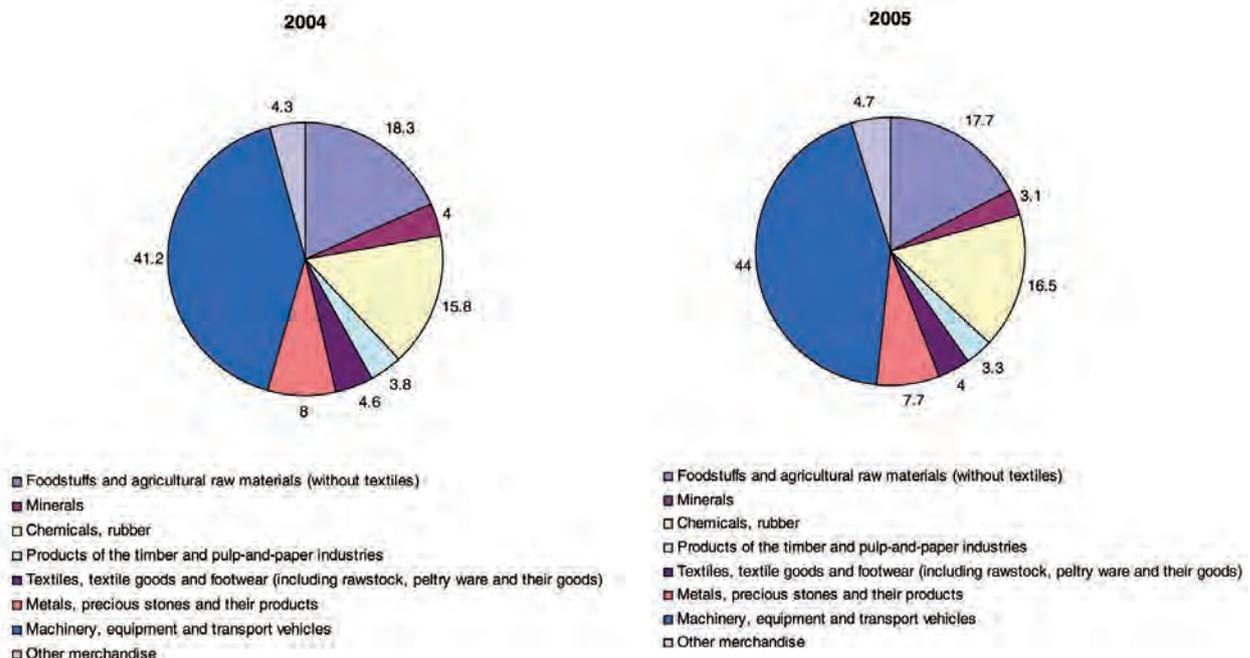
As can be seen from the data, Russian exports continue to be oriented to the export of minerals, metals, precious stones and articles made from precious stones. Imports consist of such commodities as machines and equipment including vehicles, chemical products, as well as food products and agricultural goods.

Exports

Figure 2.1.6.1. Exports and Imports for 2004 and 2005 (%)



Imports



2.2. Overall Score of the Copyright-Based Industries in the Russian Economy

2.2.1. Major Indicators Characterizing the Contribution of the Copyright and Related Rights-Based Industries to the Russian Economy

Table 2.2.1.1 demonstrates that the copyright contribution to the Russian economy by major indicators was as follows:

- turnover - 8.66 per cent;
- employment (average annual number of workers in the economy) - 7.3 per cent;
- GDP - 6.06 per cent;
- foreign trade turnover - 7.21 per cent.

Table 2.2.1.1. Contribution of Copyright to the Russian Economy in 2004

	Turnover		Employment		GDP		Foreign trade turnover	
	Billion rubles	%	Thousand people	%	Billion rubles	%	Million US dollars	%
Overall indicator	29,201.30	100	67,134	100	16,778.8	100	280 600	100
including:								
Core copyright and related rights-based industries	821.25	32.48	2,882.43	58.82	400.11	39.38	3,450.20	17.06
Interdependent copyright industries	419.20	16.58	502.98	10.26	127.39	12.54	14,619.23	72.27
Partial copyright industries	137.67	5.44	376.31	7.68	45.43	4.47	2,158.72	10.67
Non-dedicated support industries	1,150.58	45.50	1,138.53	23.23	443.13	43.61		0.00
Grand Total	2,528.70	8.66	4,900.27	7.30	1,016.1	6.06	20,228.15	7.21

Table 2.2.1.1 illustrates the contribution of some groups identified according to the WIPO methodology. Figures 2.2.1.1-2.2.1.4 describe the composition of the contribution of some sub-industries related to copyright, by each of the overall indicators given in Table 2.2.1.1.

The total turnover of the Russian copyright-based industries totaled 2,528.70 billion rubles (at the rate of 27.75 rubles per one US dollar³ = 73.99 billion US dollars) comprising 8.66 per cent of the turnover of all industries in Russia.

The contribution of the copyright industries to the Russian economy is comparable with the contribution of many other major industries.

Figures 2.2.1.1-2.2.1.4 show the comparisons with other industries.

³The official exchange rate of US dollar/ruble is given at the end of 2004: Russia in Figures: Krat.Stat. Sb./Rosstat-M., 2006, - 462 S., p.455.

Figure 2.2.1.1. Turnover of Some Industries in 2004

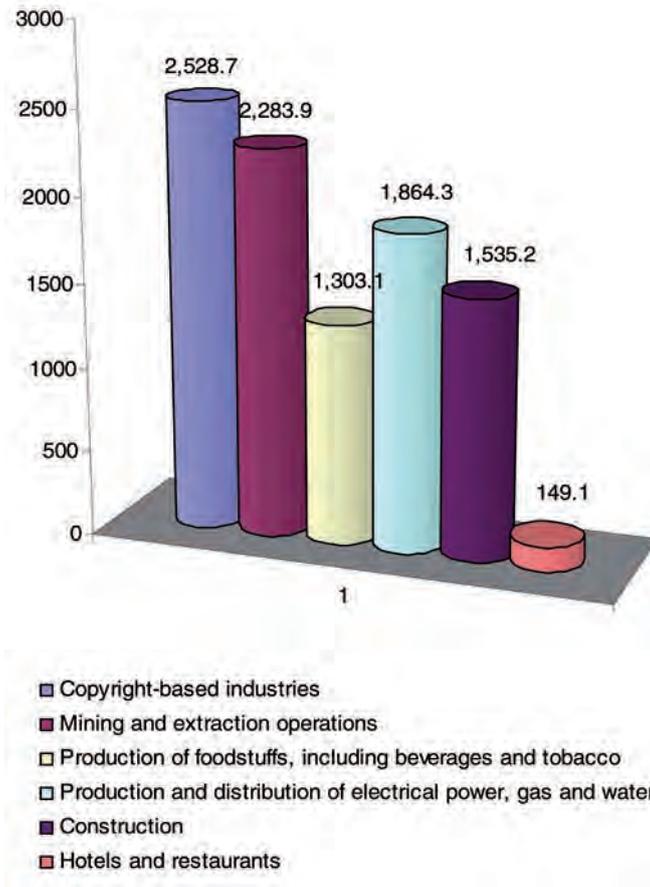
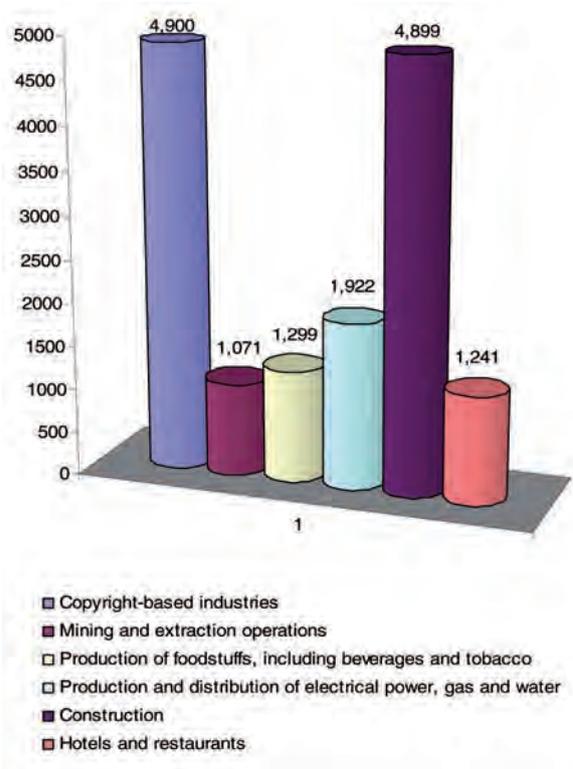


Figure 2.2.1.2 shows that the turnover of such industries as mining operations, production of foodstuffs (including beverages and tobacco), production and distribution of electric power, gas and water, construction, hotels and restaurants contribute less, and in some cases substantially less, than the copyright-based industries. Mining operations, as well as the production and distribution of electrical power, gas and water were shown to be comparable by the volume of turnover. The wholesale and retail and manufacturing sectors were the only ones with higher indicators.



Figure 2.2.1.2. Employment Levels in Some Industries in 2004



Regarding the number of workers, the copyright-based industries were comparable only with mining operations. Even such a labor-intensive industry as the production and distribution of electrical power, gas and water did not account for the same high level of employment.

Figure 2.2.1.3. Volume of GDP in Some Industries in 2004

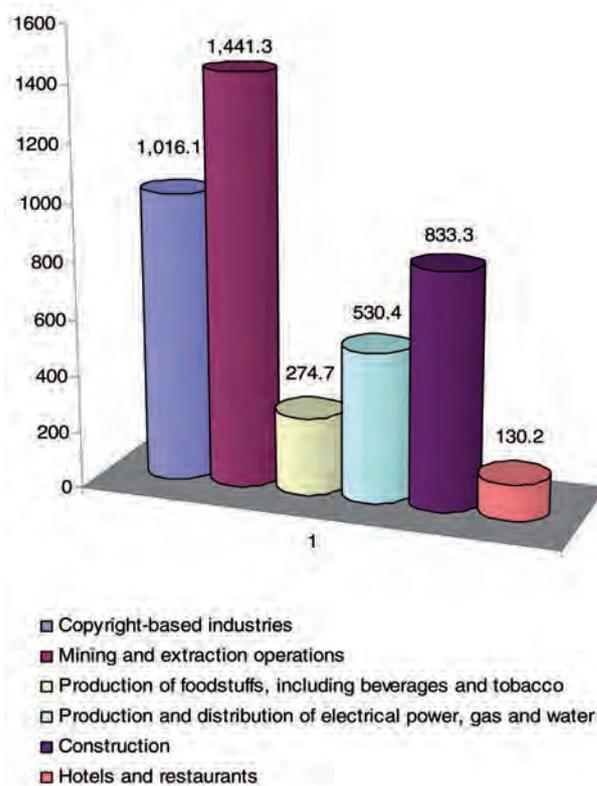
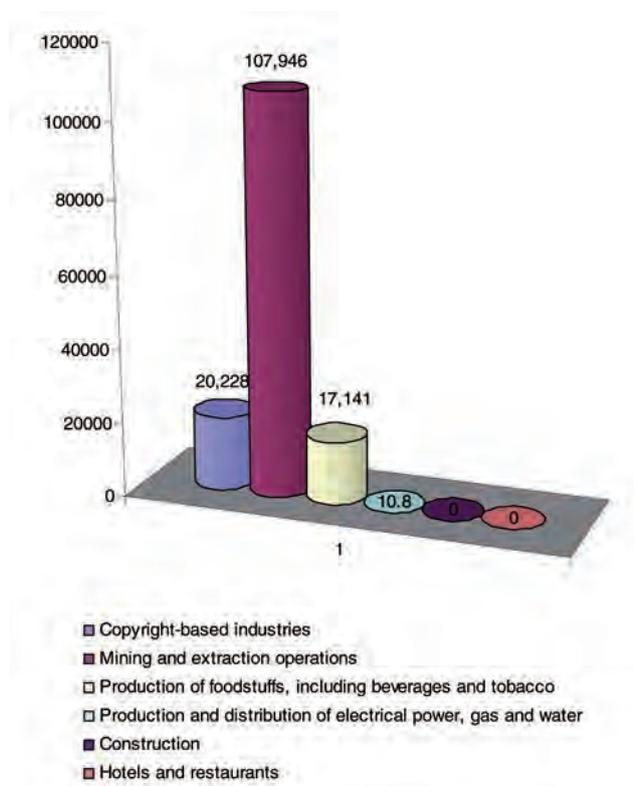


Figure 2.2.1.3 reveals that mining operations alone made a bigger contribution to GDP than all the other copyright-based industries. This meant that close attention to these industries, protection of authors and rights holders and greater awareness by the population of IP issues were capable of providing for further growth in their contribution to GDP.

As shown in figure 2.2.1.4, the mining industry and the production of foodstuffs and electric power provided the advanced and most important contribution to foreign trade. This phenomenon can be explained not only by the low level of contribution to foreign trade of the copyright industries, but primarily by the country's priorities in the export of minerals.

Figure 2.2.1.4. Foreign Trade Turnover in Some Industries in 2004

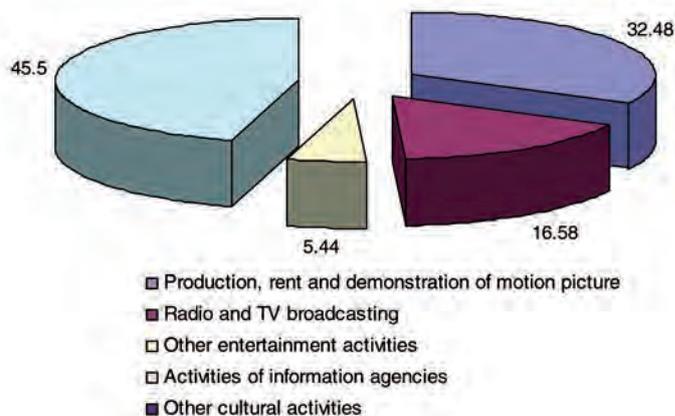


Thus the comparison with some leading industries (sub-industries) vividly demonstrated the importance of copyright to the Russian economy. Bearing in mind the trends in the creation and development of certain parameters of the Russian economy identified earlier, we concluded that there was a positive trend towards a further increase in the importance of copyright to the Russian economy.

2.2.2. Contribution of the Copyright-Based Industries in 2004

The total contribution to the turnover of the Russian economy added more than 2,5 trillion rubles, providing a share of more than 8.6 per cent in total turnover. Figure 2.2.2.1 demonstrates the impact of the industries and types of activity dependent on copyright and related rights.

Figure 2.2.2.1. Contribution of the Copyright-Based Industries to Total Turnover in 2004 (% of total)



In figure 2.2.2.1 the major share (more than 45 per cent) of the turnover of the copyright and related rights industries was provided by the core copyright industries. A significant role was played by the interdependent copyright industries which contributed around 32.5 per cent.

The non-dedicated support industries, which provided general support to business and product promotion, contributed about 17 per cent. A significant part (about 5 per cent) was accounted for by partial copyright industries.

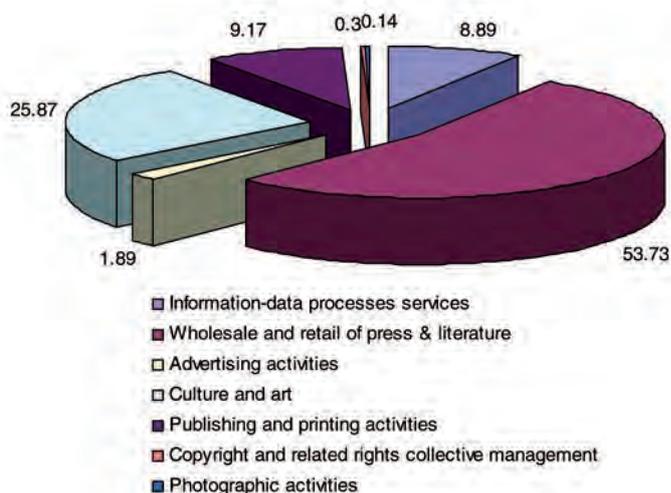
2.2.2.1. Contribution of the Core Copyright Industries in 2004

The total volume of turnover of the core industries was one billion rubles accounting for 821.3 billion rubles, or almost 45 per cent of overall turnover related to copyright in all branches of the economy.

The main role was taken by such industries as the wholesale and retail of press and literature and other printed matter (53.73 per cent).

Culture and art contributed 25.87 per cent (212.5 billion rubles); publishing and printing – 9.17 per cent; information and data processing services – 8.89 per cent. The composition of the core industries is presented in figure 2.2.2.1.1.

Figure 2.2.2.1.1. Composition of the Core Copyright Industry Turnover in 2004



Thus the contribution of the core industries comprised almost half of the turnover of all copyright-based industries. Turnover indicators of the core industries for determining the copyright contribution to the national economy were applied with a correction factor of 100. This is why statistical data on the turnover of each sub-industry were included in full without any correction in the turnover indicators for the main group of core industries.

Figure 2.2.2.1.2. shows the composition of the culture and art sector. TV and radio broadcasting with a share of more than 62 per cent (132.6 billion rubles) took the lead in the total volume of this sector's turnover. The share for theatrical and other entertainment activities was 16,66 per cent (35.4 billion rubles).

Figure 2.2.2.1.2. Turnover of the Culture and Art Sector in 2004

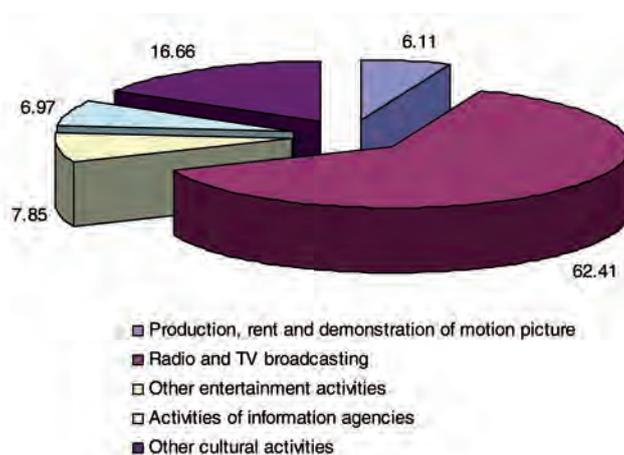


Table 2.2.2.1.3 shows the development of cultural agencies from 1995 to 2004. This period was characterized by stable growth in the number of professional theaters and museums. There was a continuous downturn in the total number of libraries and the reduction in their stock.

Table 2.2.2.1.3. Development of Culture and Leisure Agencies in 1995-2004

<i>Indicator</i>	1995	2000	2001	2002	2003	2004
Total number of libraries ('000)	54.4	51.2	51.2	51.0	50.6	49.9
Total library stock ('000,000) copies	1,104	1,027	1,022	1,014	1,007	988
Total number of professional theaters	470	547	556	571	568	579
Total number of museums	1,725	2,047	2,113	2,189	2,229	2,269
Number of cultural and leisure agencies ('000)	59.9	54.8	54.8	54.2	53.6	52.9

Major Russian libraries, i.e. the Russian Federal Library (RFL), whose total volume of stock goes beyond 44 million copies of publications, accounted for 4.5 per cent of all library stock.

It should be noted that despite market reforms, the use of libraries is free, which accounted for the high volume of budget funding for this sector and other similar institutions (including children's theater), somewhat understating the sector's contribution to the total volume of the sector.

Turnover volume in IT services accounted for a total of 73 billion rubles.

The major share in this was contributed by such activities as:

- software development and consultancy (45.29 per cent or 31.5 billion rubles);
- other activities using IT (21.96 per cent or 16.1 billion rubles);
- activities in the development and use of databases and information (18.18 per cent or 13.5 billion rubles).

As can be seen from the data, the leading role in the IT sector was that of software and consultancy. This was forecast to actively develop as well, as there was a steady growth in demand for such services caused by the increase in the number of organizations using IT and communications in their activities.

In 2003 the number of organizations using IT and communications exceeded 102,000, including those in the government and municipal sector with more than 30,000 organizations; the wholesale and retail trade, repair and maintenance of vehicles, motorcycles, household appliances and personal use articles, more than 13.5 thousand organizations; transport and communications, approximately 7.5 thousand organizations; construction around 6,000 organizations; higher professional education with 1.4 thousand organizations; other fields of activity with more than 20,000 organizations.

That same year, practically all these organizations used personal computers, more than half of them using local computer networks; more than 60 per cent using access to global networks in their work and about 17 per cent using dedicated communication channels.

In 2004 the number of organizations using IT and communications technologies reached 107,000. Most of these organizations used personal computers; more than 60 per cent used local computer networks; around 70 per cent used access to global networks; more than 20 per cent used dedicated communication channels.

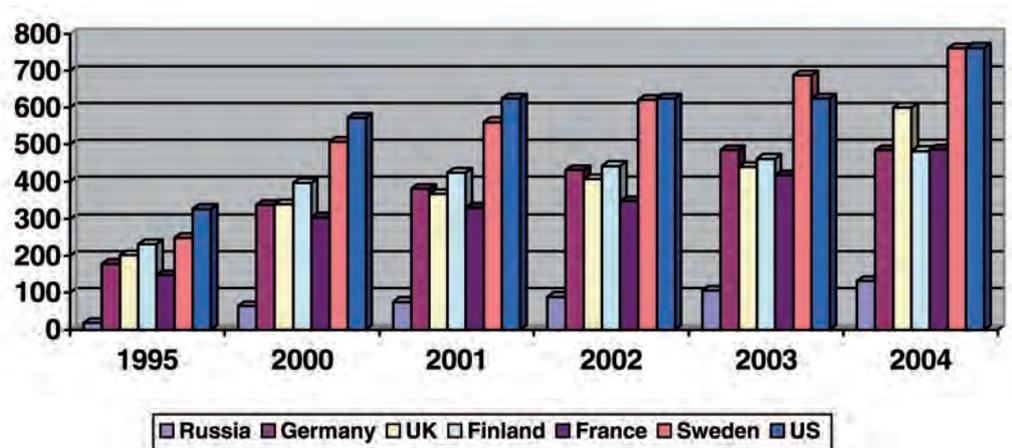
The number of organizations using the Internet in their activities grew from 11.6 per cent of the total number of registered organizations in 2002 to 14.4 per cent in 2004. Over the same period this growth was significantly higher in some other sectors of the national economy.

For example, in the chemical industry, it equaled 39.4 per cent and 49.4 per cent; the manufacture of electrical equipment, electronic and optical equipment – 39.6 per cent and 44.9 per cent; scientific research and development - 37.2 per cent and 38.7 per cent; higher professional education – 48.4 per cent and 52.3 per cent, respectively.

The total volume of expenditure on IT and communications grew from 164.5 billion rubles in 2003 to 168.4 billion rubles in 2004, or by 2.38 per cent.

However, international comparisons showed that the market capacity still had huge growth potential: the number of personal computers per 1000 people in Russia materially lagged behind the level of the developed European countries and the US, and this can clearly be seen in figure 2.2.2.1.4.

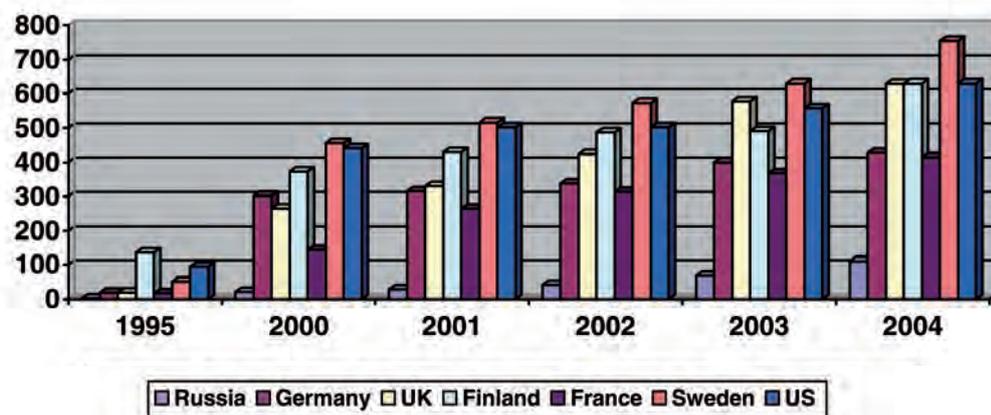
Figure 2.2.2.1.4. Number of Personal Computers per 1000 People



The data show that by 2004 the number of personal computers per 1000 people in Russia was somewhat above 100 units (i.e. 134 units), while in the US and Sweden the figure was above 700 units; in the UK it reached 600 units and in Finland, France and Germany it was nearly 500 units.

Similarly, a noticeable lag was demonstrated by the number of Internet users per 1000 people and the number of Internet servers (hosts) per 100 people, shown below in figures 2.2.2.1.5 and 2.2.2.1.6, respectively.

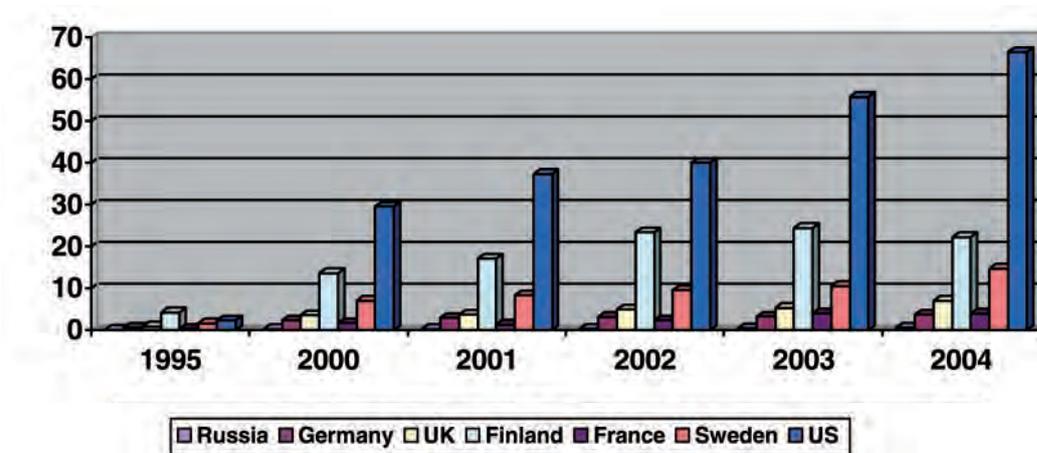
Figure 2.2.2.1.5. Number of Internet Users per 1000 People



In Finland, the UK and the US the number of Internet users per 1000 people was above the 600 level; in France and Germany – the 400 level. In Russia this indicator was at the time of the study much lower, and equaled 111 per 1000 of the population in 2004. At the same time the rate of growth in Internet users in 2003 and 2004 rose significantly and amounted to 65.8 per cent and 63.2 per cent respectively compared with the previous year. In Sweden, in the same period, the growth rate amounted to 9.9 per cent and 19.8 per cent, respectively.



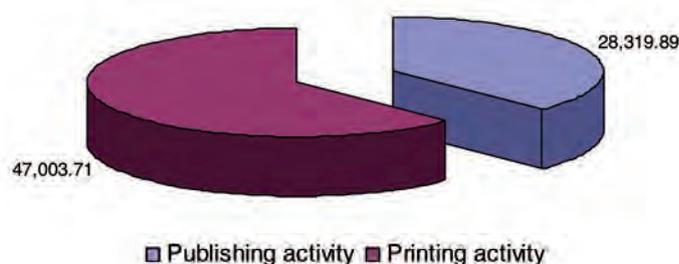
Figure 2.2.2.1.6. The Number of Internet Servers (hosts) per 100 people



As can be seen from the chart, the number of Internet servers (hosts) per 100 people demonstrates a growth figure surpassed only in the US, which had left all the other countries far behind and was reaching a level of 70 hosts per 100, and Finland, which led when compared with the other countries, but had still only been able to go above 20 hosts per 100 of the population. In Russia this indicator had not reached the level of one unit per 100 of the population.

Figure 2.2.2.1.7 shows the composition of the turnover for printing and publishing activities in 2004.

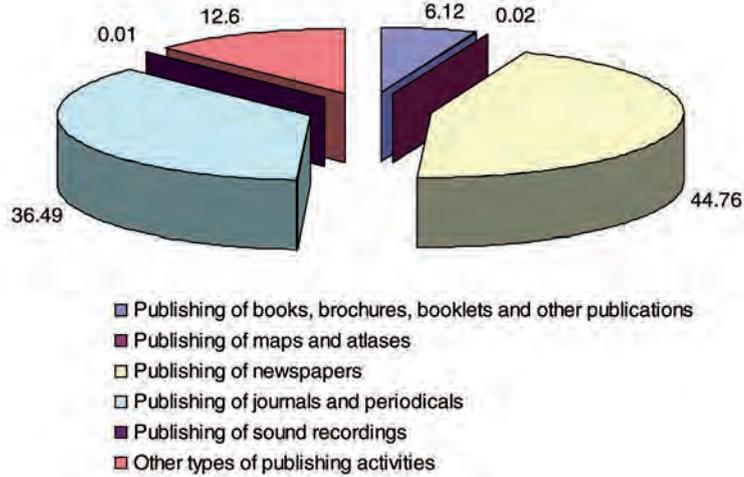
Figure 2.2.2.1.7. Turnover of the Printing and Publishing Sector in 2004



These data show that printing activities prevailed, their share amounting to 60 per cent of the total turnover for these industries.

Figure 2.2.2.1.8 illustrates the turnover of the publishing sector.

Figure 2.2.2.1.8. Turnover of the Publishing Sector in 2004



These data show that newspaper publishing (44.76 per cent or 11.6 billion rubles) and magazines (36.49 per cent or 9.4 billion rubles) prevailed in the publishing sector, whereas the publishing of books and brochures contributed slightly more than 6 per cent (for each type of publication).

Figure 2.2.2.1.9. Annual Print Runs of Books and Brochures (millions of copies)

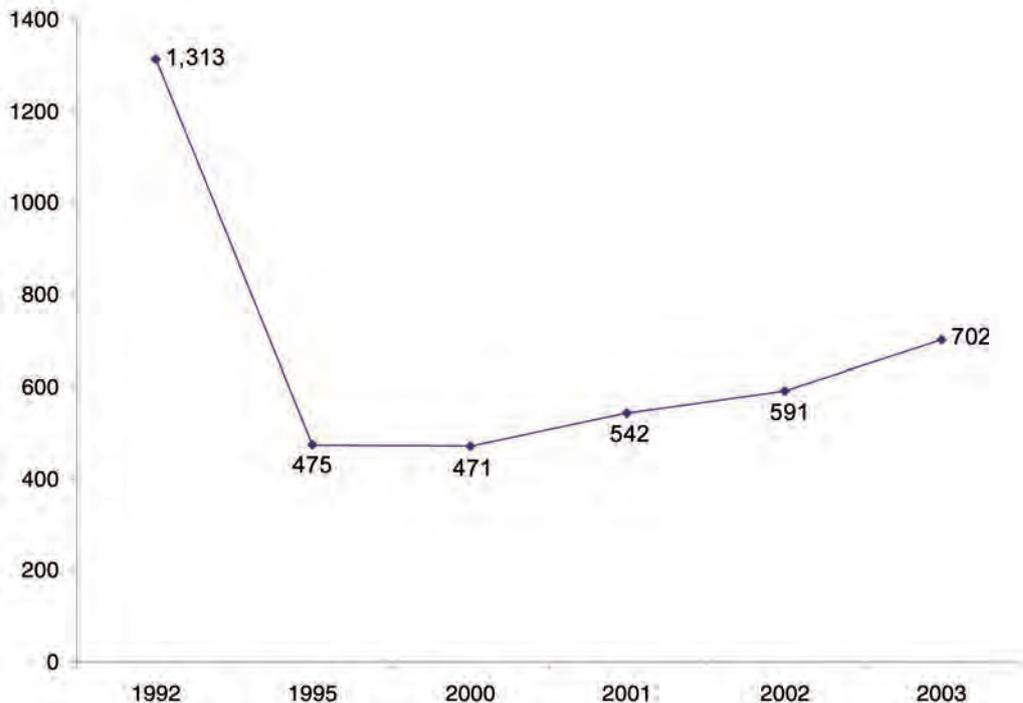
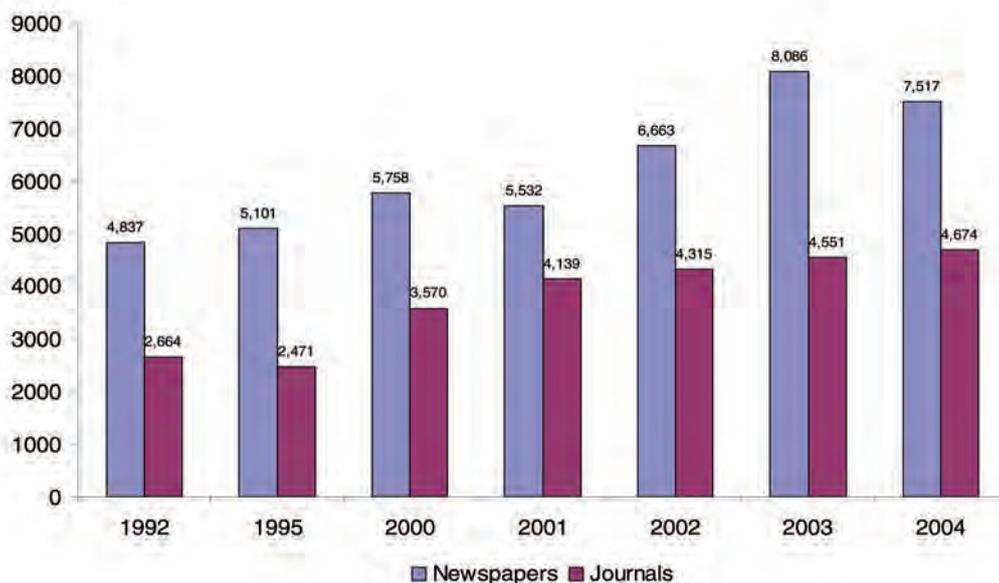


Figure 2.2.2.1.9 illustrates the annual print runs for books and brochures. There was a marked decrease compared with 1992 when annual print runs dropped virtually threefold. By 2003, annual print runs of books and brochures rose to 702 million copies with 686 million copies in 2004.



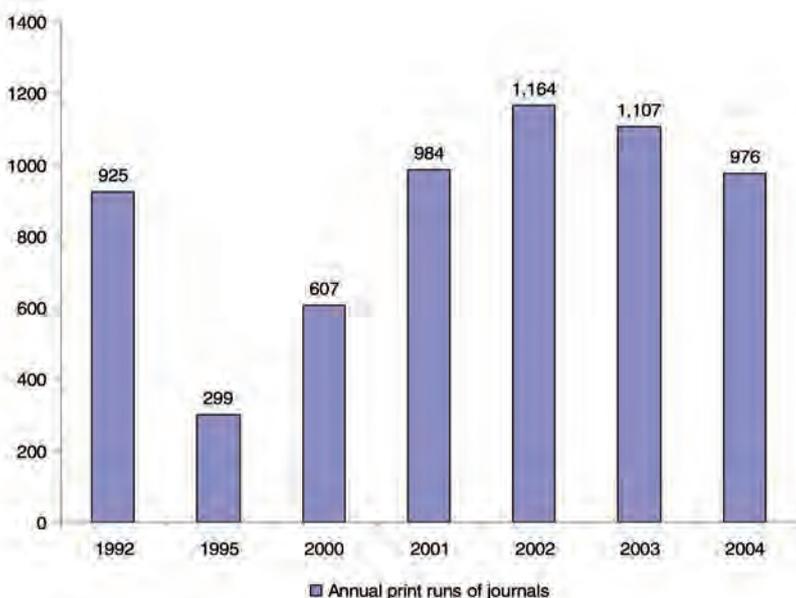
Figure 2.2.2.1.10. Numbers of Magazines and Newspapers Published from 1992 to 2004



Figures 2.2.2.1.11 and 2.2.2.1.12 show the number of publications and annual print runs of magazines and newspapers.

From 1992 to 1995, annual print runs of magazines and other publications reduced threefold. However, they later increased at a faster rate than book publishing. There was a certain reduction in print runs of magazines from 2002.

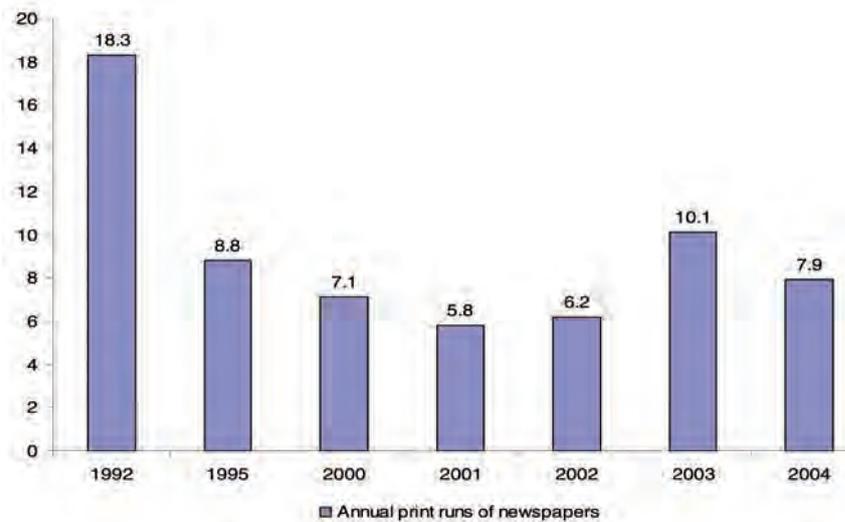
Figure 2.2.2.1.11. Annual Print Runs of Magazines from 1992 to 2004 (millions of copies)



Annual print runs in Russia were always measured in billions of copies. The reduction of print runs of newspapers by two and a half times from 1992 to 1995 was somewhat lower than the print runs of books and magazines. Reductions continued up to 2001.

The highest number of print runs—more than 10 billion copies—was registered in 2003 and in 2004 this dropped again to 7.9 billion copies.

Figure 2.2.2.1.12. Annual Print Runs of Newspapers from 1992 to 2004 (billions of copies)



Newspaper publishing dropped by almost 500 titles. This drop is explained by competition and supply and demand. It was with print runs of one billion that newspaper publishing came back to prominence in the overall turnover of the publishing industry.

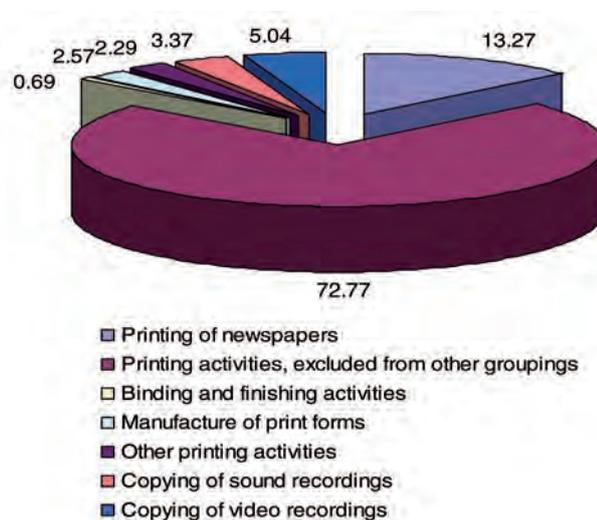
In 2005 the number of newspaper titles amounted to 769 and the volume of one-off print runs grew by more than double, exceeding 16 million copies. As a result, the number of newspaper copies per 1000 of the population amounted to 114.

It should be pointed out that in the UK, for example, the number of newspaper titles amounted to 108, while one-off print runs exceeded 19 million copies, giving a total of 326 copies per 1000 of the population. In Germany similar indicators were 382, 23.9 million copies and 291 copies, respectively⁴.

Printing occupied virtually two thirds of all publishing and printing activities from 1992 to 1995, exceeding by 1.5 times the turnover of the publishing industry.

Figure 2.2.2.1.13 shows the turnover of the industry.

Figure 2.2.2.1.13. Turnover of Printing Activities in 2004



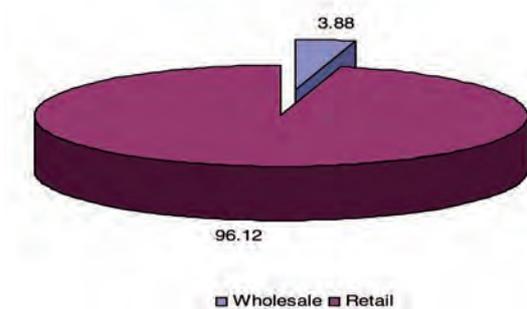
⁴The figures are given for 2000, more recent information was not available at the time of the study.

Printing activities not included in other groups amounted to more than 72 per cent or 34.3 billion rubles in the overall composition of printing activities. They included magazines, books and other printed matter. Newspapers accounted for only 13,27 per cent or 6.2 billion rubles of the turnover of the sector. This appeared to be due to the low prices for the preparation of newspapers for printing, the most easily affordable type of publication.

Figure 2.2.2.1.14 shows the sales of printed products.

Retailing accounts for the highest share in the sales of printed products.

Figure 2.2.2.1.14. Sales of Printed Products in 2004

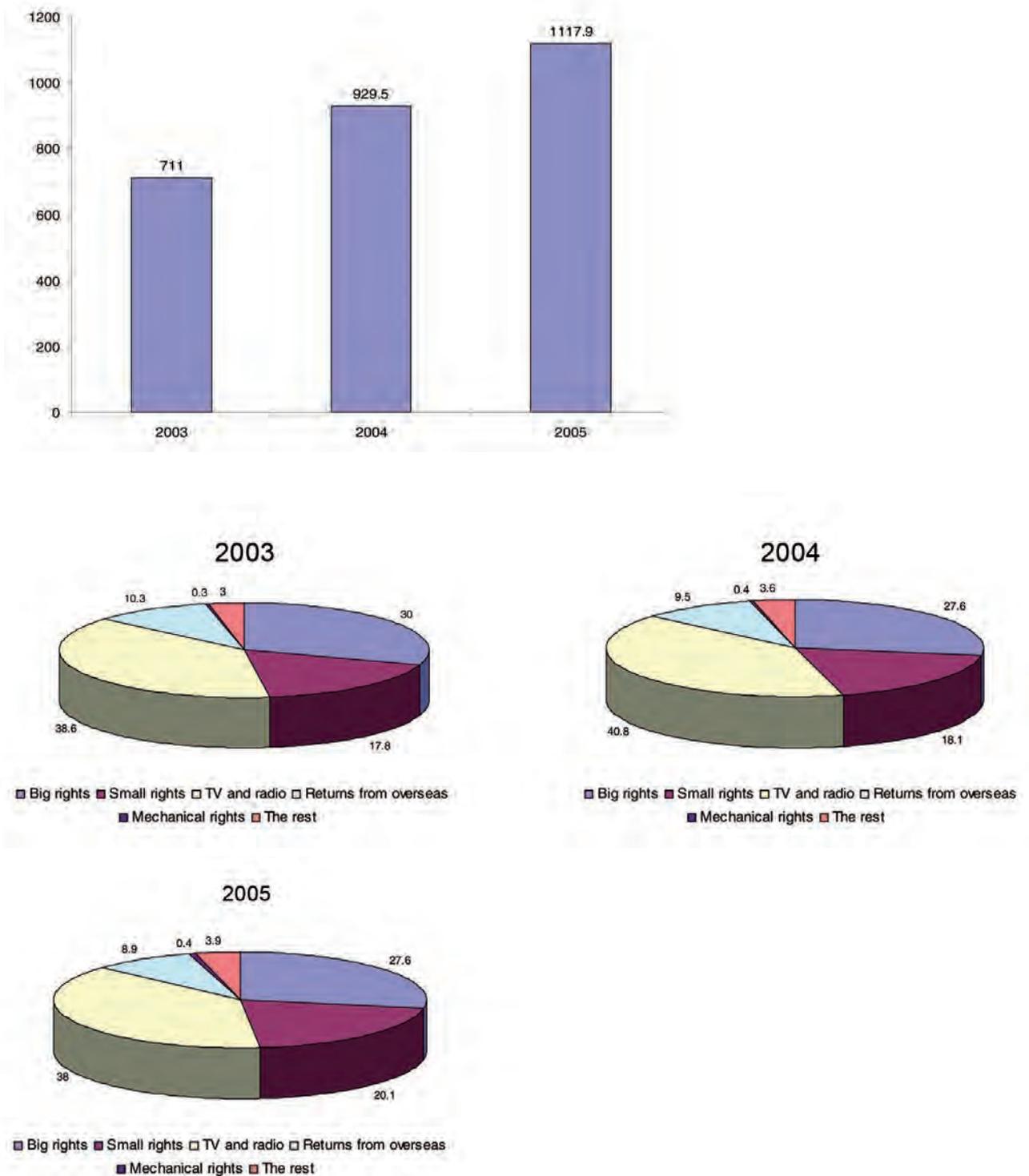


Such a high specific weight for retail printed products can be explained mostly by the presence of stable ties between retailers and the leading publishers, as well as by direct long-standing business relations.

The activities of copyright and related rights collective management societies had been gaining momentum. This was a new phenomenon in Russia, since remuneration in the years before the study rested on somewhat different parameters than is customary elsewhere in the world. Much attention of late has been paid to the legal and organizational aspects of collective management in Russia. An in-depth study promoted the development of a theoretical basis for this type of activity.

The Russian Copyright Agency is the largest and the oldest in Russia. It is known not only at home, but also overseas. Figure 2.2.2.1.15 illustrates the dynamics of collection and composition of fees for the use of copyright and related rights by this agency.

Figure 2.2.1.15. Earnings for Copyright and Related Rights in 2003-2005 (millions of rubles)



As can be seen in the above figure, in the period from 2003 to 2005 the total growth in earnings from copyright and related rights use in Russia accounted for more than 157 per cent.

In the earnings structure, the most important sector (accounting for 38 to 40 per cent) related to earnings from radio and television, as well as major rights, the share of which fell somewhat, from 30 per cent in 2003 to 27.6 per cent in 2005.

On the contrary, the share of minor rights grew: from 17.6 per cent in 2003 to 20.1 per cent in 2005. A decreasing tendency in earnings from overseas sources was evident, falling from 10.3 per cent in 2003 to 8.9 per cent in 2005.

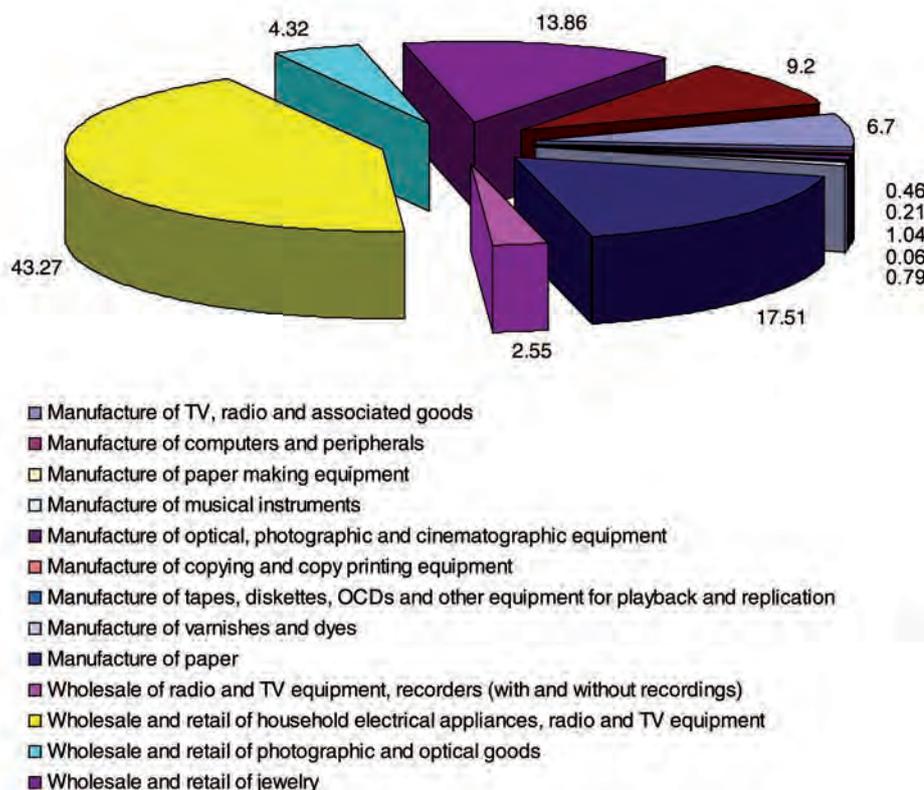
2.2.2.2. Contribution of the Interdependent Industries in 2004

The interdependent copyright industries contributed about 420 billion rubles, or around 23 per cent to the overall turnover of all copyright-based industries. Figure 2.2.2.2.1 illustrates the composition of this contribution.

The above data show that the leading players in the interdependent copyright industries were:

- wholesale and retail of household electrical appliances, radio and TV equipment (43.27 per cent or 181.4 billion rubles);
- paper manufacture (17.51 per cent or 73.4 billion rubles);
- wholesale and retail of jewelry (13.89 per cent or 58.2 billion rubles);
- wholesale and retail of glass products and pottery (8.85 per cent or 37.1 billion rubles);
- manufacture of radios, TVs and associated goods (6.7 per cent or 28 billion rubles).

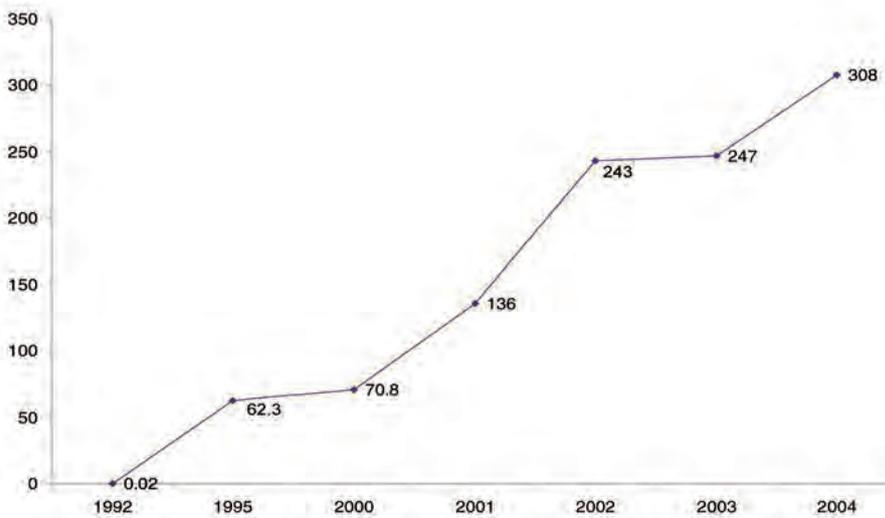
Figure 2.2.2.1. Turnover of the Interdependent Copyright Industries in 2004



Figures 2.2.2.2.2 to 2.2.2.2.5 show the share for manufacture of the main goods produced by the interdependent copyright industries. Let us consider the individual contribution of the industries to the overall turnover in more detail.

The following figures demonstrate that the manufacture of PCs grew unevenly from 1992 to 2004, with their output stepping up to 308,000 pieces by 2004. This indicator was quite low compared with other countries, but it reflected certain positive trends in the output of high-tech products, which are always in great demand in the IT sector.

Figure 2.2.2.2. Manufacture of PCs ('000 pieces)



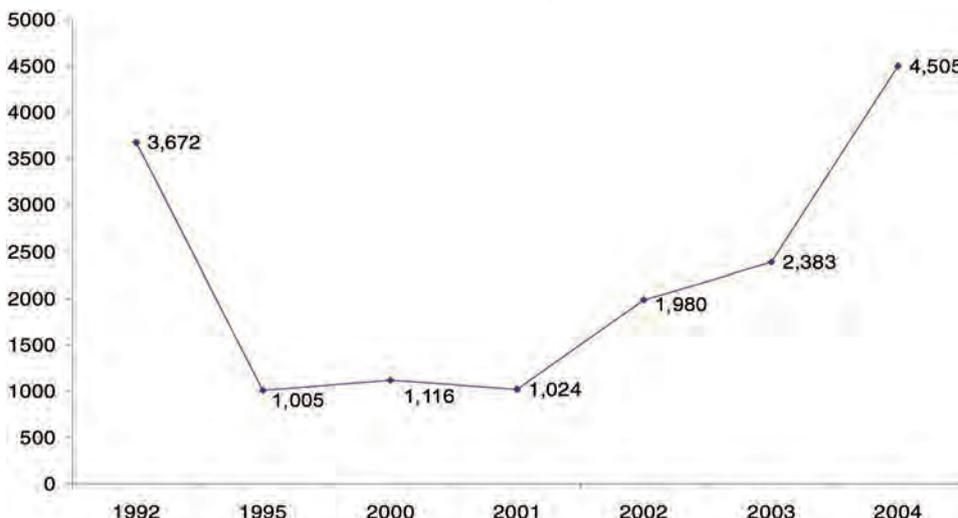
Compared with 1995, total PC production grew from 62.3 thousand units to 308,000 units in 2004, or approximately fivefold.

Compared with 1995, total manufacture of TV sets grew by almost 4.5 times and, in 2004, reached a level of 4.5 thousand units, which exceeded the corresponding indicator for 1992.

The manufacture of video-tape recorders grew by more than 6.7 times in the period from 1995 to 2004, having reached an annual figure of 150,000 units. The manufacture of means of communication and other radio-electronic equipment was developing fast.

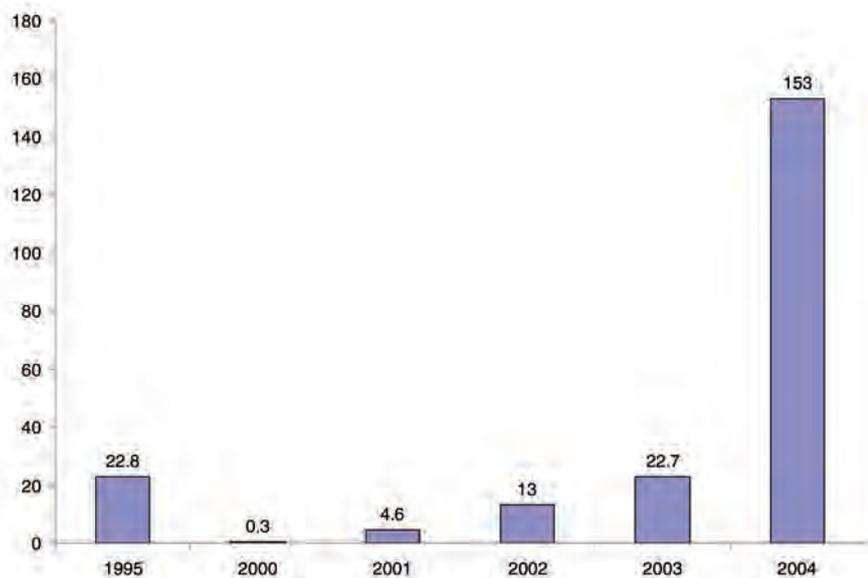
Automatic telephone station production increased by 3.3 times from 1995 and in 2004 amounted to 428.3 thousand telephones.

Figure 2.2.2.3. Manufacture of TV Sets ('000 pieces)



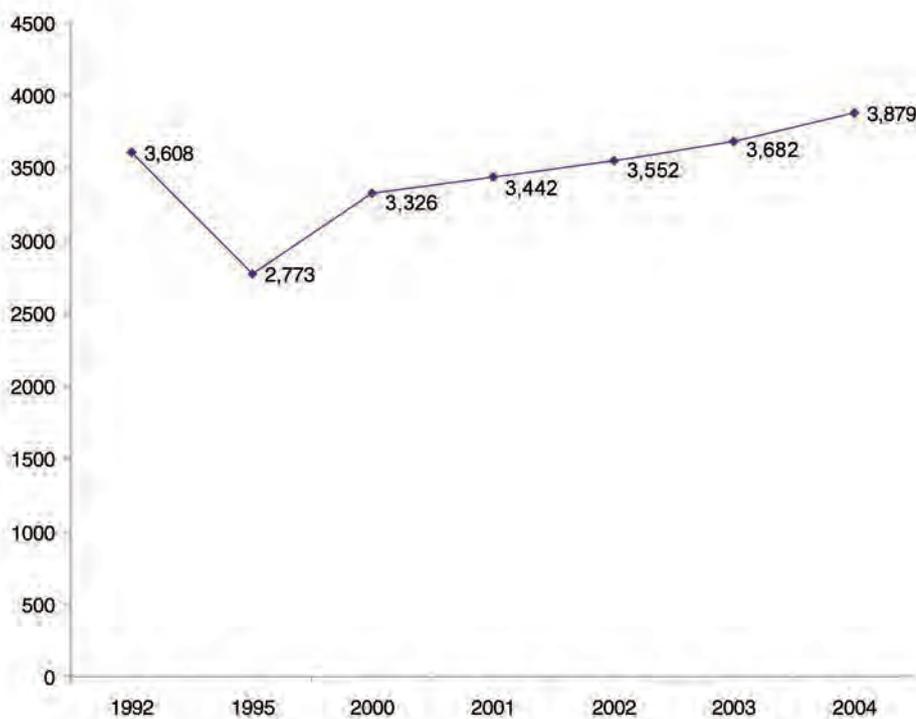
The production of computer-controlled telephone stations grew in the same period by 6.9 times and amounted to 574.3 thousand telephones in 2004.

Figure 2.2.2.4. Manufacture of Video-Tape Recorders ('000 pieces)



The production of radio-relay stations increased almost sevenfold and amounted to 872 units in 2004. The production of telephone cables amounted to 245,000 km, having exceeded by 4.6 times the 1995 level; the manufacture of radio wires increased by 2.6 times, amounting to 17.3 thousand km in 2004.

Figure 2.2.2.5. Paper Manufacture ('000 tons)



These figures show that by 2004 the volume of TV sets and video-tape recorders manufactured grew rapidly, although imports were, as before, high and the demand had still not been met.

2.2.2.3. Contribution of the Partial Copyright Industries in 2004

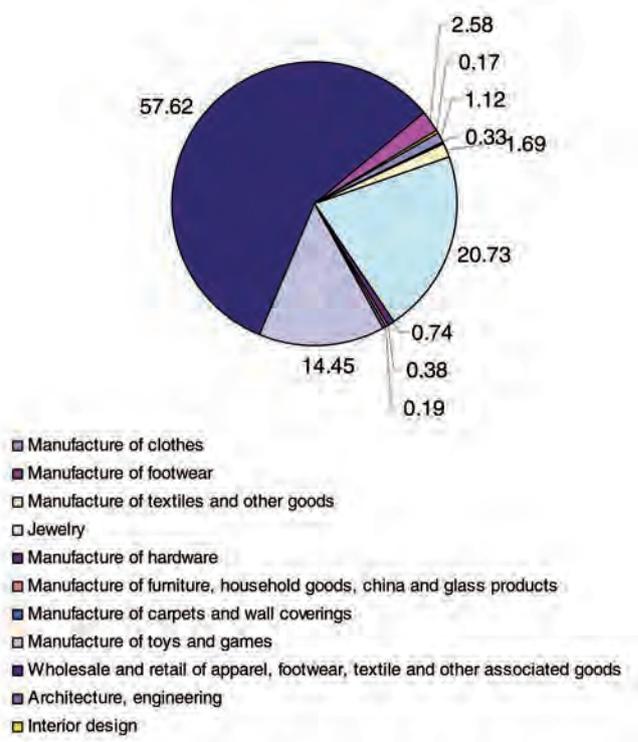
The partial copyright industries are less essential for the economy. Nevertheless, they play an important role, since their share of the turnover was more than 137 billion rubles and comprised more than 7.5 per cent of the total volume of all national copyright-based industries. The turnover of the partial copyright industries is given in figure 2.2.2.3.1.

These data show that the major share was taken by:

- wholesale and retail of clothing, footwear, textiles and other associated goods (57.62 per cent or 79.3 billion rubles);
- jewelry (20.73 per cent or 28.5 billion rubles);
- manufacture of toys and games (14.45 per cent or 19.9 billion rubles).

The manufacture of clothing, textiles and footwear, as well as some other industries did not unduly influence turnover volumes, since these goods were replaced mainly with imports.

Figure 2.2.2.3.1. Turnover of the Partial Copyright Industries in 2004

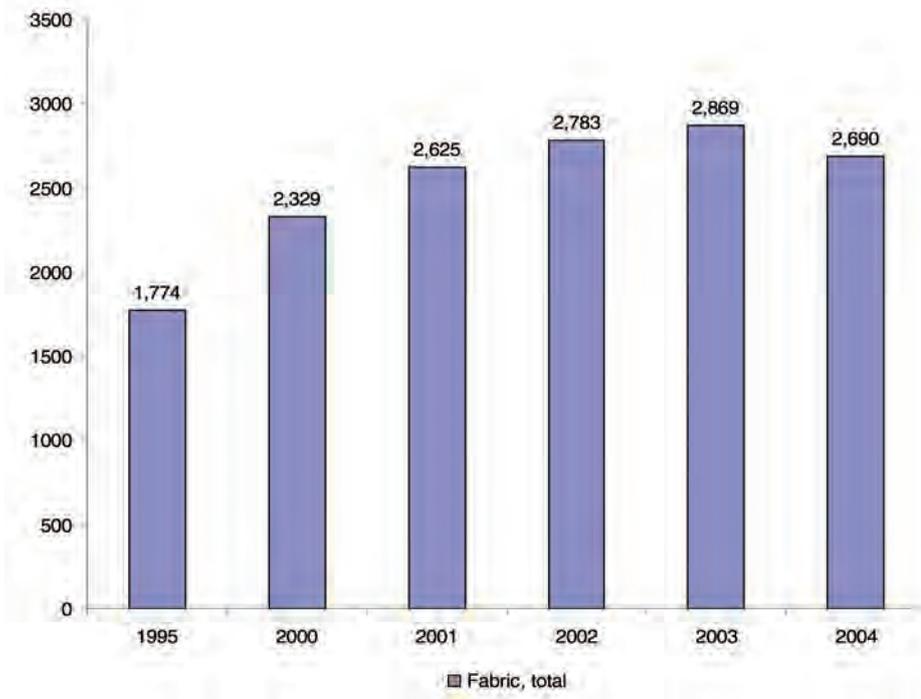


The data analyzed for this group of industries were obtained in the course of calculations applying correction factors to the statistical data on the turnover of the corresponding industries.

The correction factor for such industries as manufacture and sales (wholesale and retail) of clothing, footwear and textiles, taking account of the conditions in Russia, was used and determined to equal 4.5. Such correction was mainly based on price factors and higher levels of profitability which substantially changed the volume of GDP in these sectors.

Figures 2.2.2.3.2 to 2.2.2.3.4 provide data on the output volume of the main types of textiles, clothing and footwear.

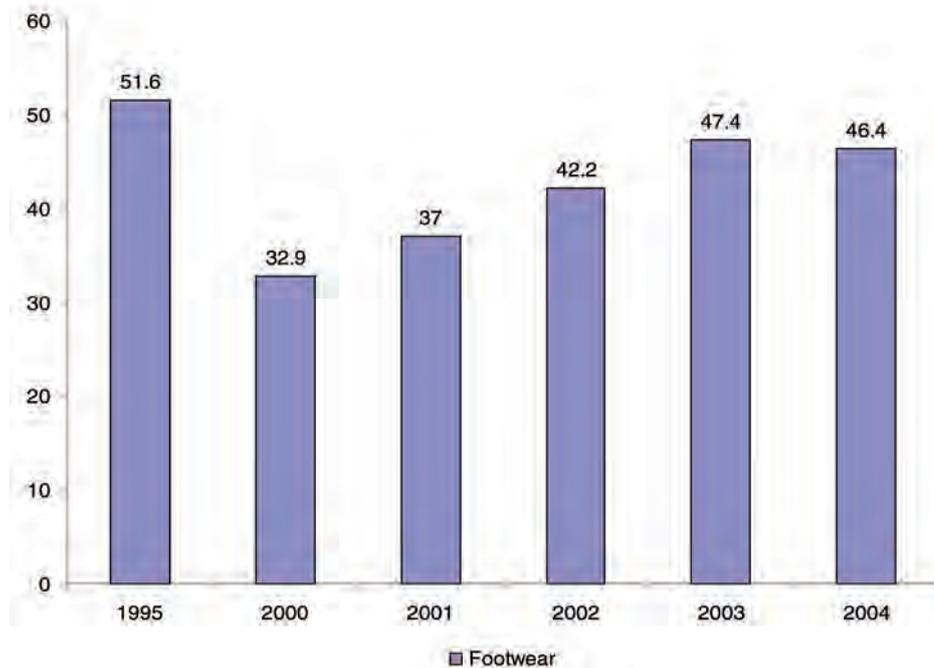
Figure 2.2.2.3.2. Manufacture of Fabrics 1995-2004 (millions of square meters)



This figure clearly demonstrates that fabric manufacture increased steadily from 1995 to 2003, although there was a slight recession in 2004. From 1995 to 2004 it increased by more than 1.5 times.

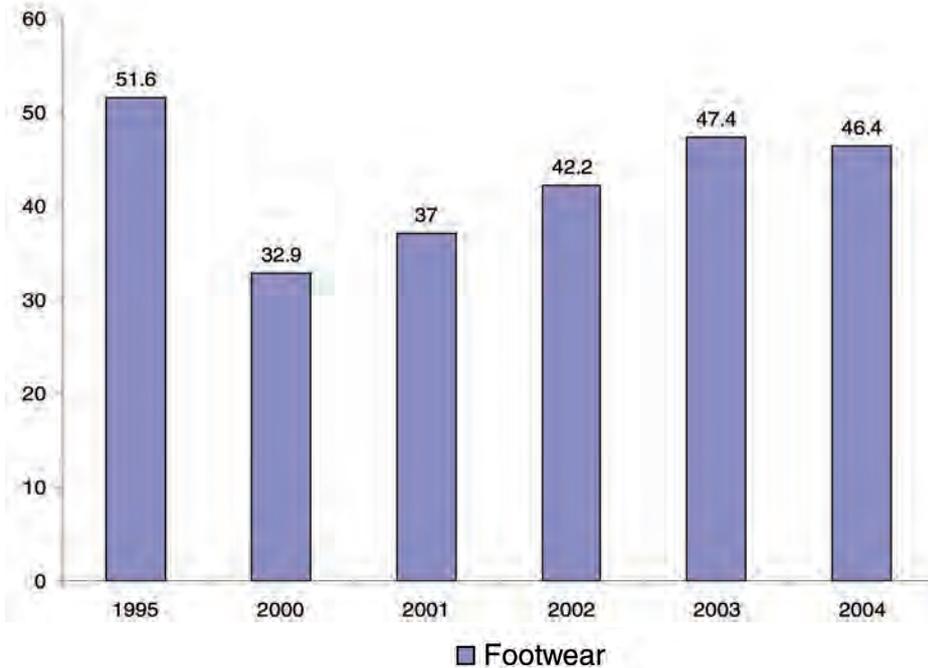
The manufacture of carpets and wall coverings reduced substantially (almost twofold) from 2001 to 2003. In 2004 manufacture increased unevenly as a result of the growing demand, and out-performed this level in 1995.

Figure 2.2.2.3.3. Manufacture of Carpets and Wall Coverings 1995-2004 (millions of square meters)



Footwear manufacture witnessed a substantial drop in output up to 2000. This gradually reversed, reaching its height in 2003, whereas 2004 was characterized by a slight downturn.

Figure 2.2.2.3.4. Footwear Manufacture 1995-2004 (millions of pairs)



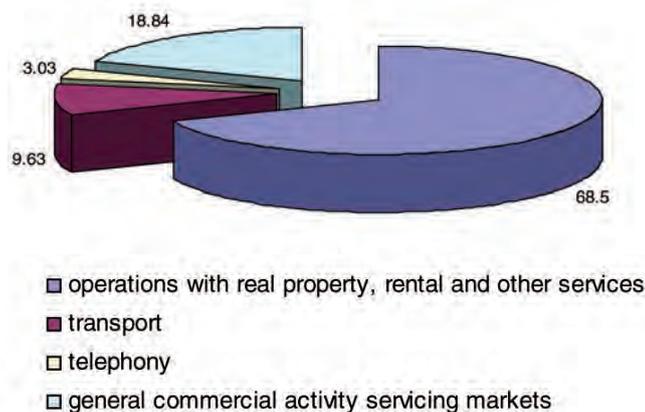
Despite a noticeable trend in growth, the 1995 level had not been surpassed at the time of the study, since the demand for this type of product was mainly met by imports.

2.2.2.4. Contribution of the Non-Dedicated Support Industries in 2004

The turnover volume of the non-dedicated support industries yielded more than 1,150 billion rubles or 45.5 per cent of the overall turnover of the copyright-based industries in 2004.

This is shown in figure 2.2.2.4.1.

Figure 2.2.2.4.1. Turnover of the Non-Dedicated Support Industries in 2004



These data show that the main role in the turnover of the non-dedicated support industries was played by real estate operations, rental and other services (68.5 per cent or 788.1 billion rubles); communication services (18.84 per cent or 216.8 billion rubles) and transport services (9.63 per cent or 110.8 billion rubles).

The analysis was carried out taking account of the calculations applying correction factors to incorporate the influence of copyright in the development of these industries.

For the communications sector, the correction factor of 40.6 was used, which was determined by the specific character of its development and its contribution to the national economy as a whole, and to GDP in particular. More detailed comments are given in each appropriate section.

We noted the following:

- the industry was characterized by high development growth;
- it showed a low level of material expenditure (interim consumption) in the structure of the output produced;
- the industry had a higher level of profitability compared with all the other industries, including the group under analysis;
- the industry paid a higher level of average salaries compared with all the other industries in the national economy.

The development of the communications industry is characterized by the following main features.

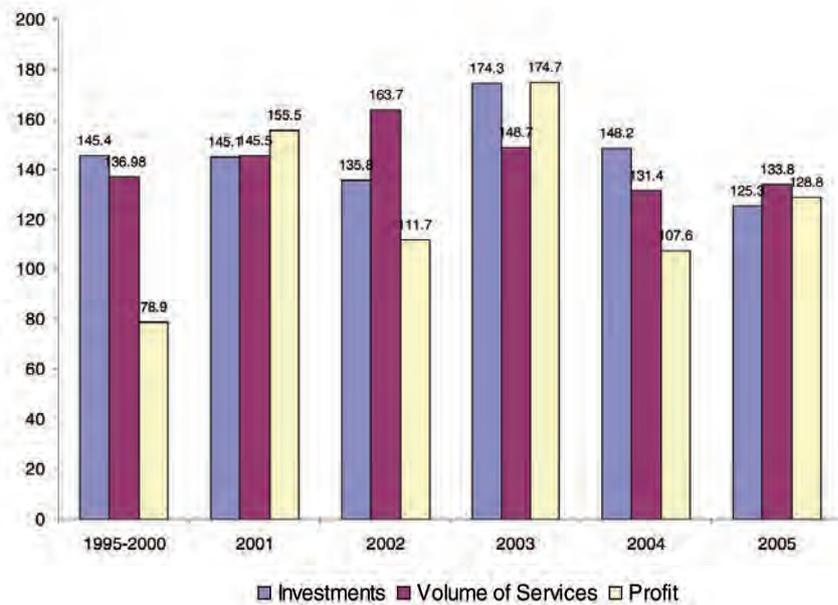
Table 2.2.2.4.3. Main Indicators of Development of the Communications Industry 1995 to 2005 (billions of rubles at actual prices)

<i>Indicators</i>	<i>1995</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2005 to 1995, %</i>
Investment in fixed capital	3.7	30.6	44.4	60.3	105.1	155.8	195.2	52.8
Profit and loss balance (profit minus loss)	7.0	34.6	53.8	60.1	105.0	113.0	145.6	20.8
Volume of paid services provided	8.6	67.5	98.2	160.8	239.1	314.2	420.3	48.9
Profit on investment in fixed capital ratio (%)	189.2	113.1	121.2	99.67	99.90	72.53	74.59	0.39
Profit on volume of paid services provided ratio (%)	81.3	51.2	54.7	37.4	43.9	35.6	34.6	0.42

The fastest growth rate in the given period was by the total volume of investments in fixed capital in the communications industry and, although by 2005 the annual growth of investment accounted for 25.3 per cent on the previous year, the annual growth rate in the 10-year period never dipped below the 100 per cent level. The maximum rate was achieved in 2003 with 174.3 per cent over the previous year.

The growth rate of the total volume of paid services provided was steadier and fluctuated between 133.8 and 163.7 per cent. The maximum rate of 163.7 per cent was achieved in 2002, which resulted from the expansion of a material base for the provision of communications services as a consequence of earlier investments which, in their turn, showed high growth rates before 2002.

Figure 2.2.2.4.2. Growth Rates for the Development of the Communications Industry 1995 to 2005 (% of the previous year)

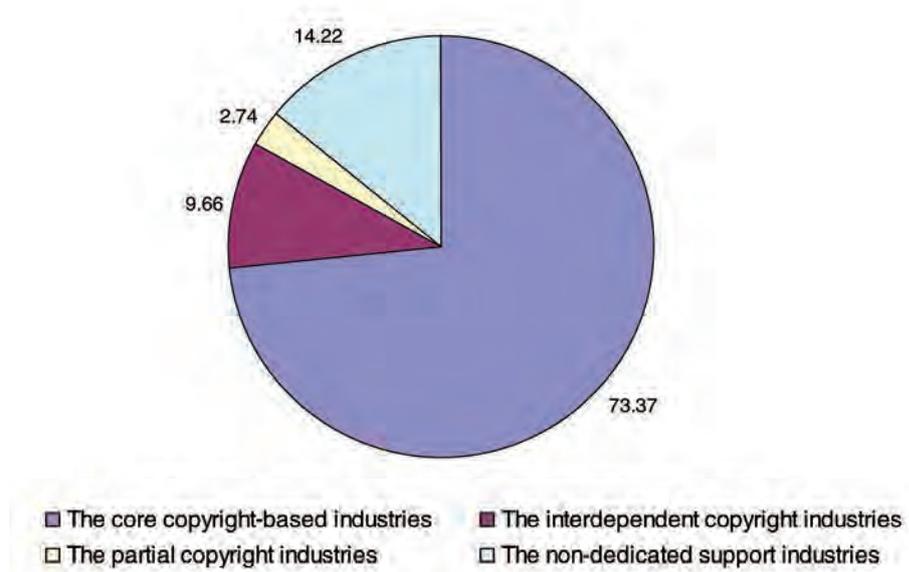


The growth rate of net profits was the most dynamic, and it could be concluded that the decrease in the rate was connected to a certain extent to the growth rate of investments in the preceding period. Falls in the growth of profits could be closely connected to the growth of advertising costs which, in accordance with Russian legislation, were included in the cost of services and costs decreasing the taxable base for the calculation of profit tax. Throughout the period 1995 to 2005, the total volume of investment in fixed capital grew by more than 52 times. In this, investment from abroad comprised 3,287 million US dollars in 2005, compared with 88 million US dollars in 1995. The volume of foreign investment grew in this period by more than 37 times.

2.2.3. Contribution to Employment of Copyright-Based Industries in 2004

The contribution of the copyright-based industries to the Russian economy as regards employment was 5,397.32 thousand workers in 2004 or 8.04 per cent. The influence of various types of economic activity on this indicator and their contribution are shown in figure 2.2.3.

Figure 2.2.3. Contribution of the Copyright-Based Industries to Employment in 2004 (% of total)



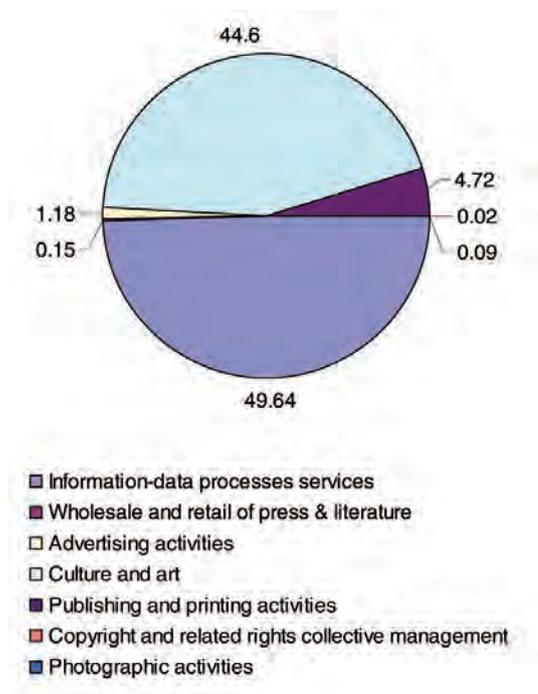
The main contribution to employment was made by the industries directly related to copyright, their influence being measured as 73.7 per cent.

This high figure demonstrated that the policy aimed at the development of the industries and types of activity such as culture and art would result in additional jobs and further modification of the employment figures.

2.2.3.1. Contribution of the Core Copyright Industries to Employment in 2004

The core copyright industries provided jobs for 2.9 million people, or nearly 58.9 per cent of the total number of those employed in the copyright-based industries. The composition of employment in various subsectors and by type of economic activity is given in figure 2.2.3.1.1.

Figure 2.2.3.1.1. Employment in the Core Copyright Industries in 2004



These data show that the main providers of employment in the core industries were:

- information-data processing services (49.64 per cent or 1,480,000 people);
- culture and art (44.2 per cent or 1,274,000 people);
- publishing and printing (4.72 per cent or 136,000 people).

The share of the other industries at the time of the study had only just exceeded one per cent. That was why they did not have a substantial impact on employment either in the core industries or in the Russian economy. This was primarily the result of the backwardness of the appropriate market mechanisms.

Features of the age composition of employees in the culture and art sector are shown in figure 2.2.3.1.2.

As can be seen, people in the 40-49 age group comprised the major share of those employed, with 27.9 per cent. The 20-29 and 30-39 age groups gave rise to significant and virtually equal shares (22.8 per cent and 22.9 per cent respectively).

Figure 2.2.3.1.2. Ages of Employees in the Culture and Art Sector in 2004 (% of total)

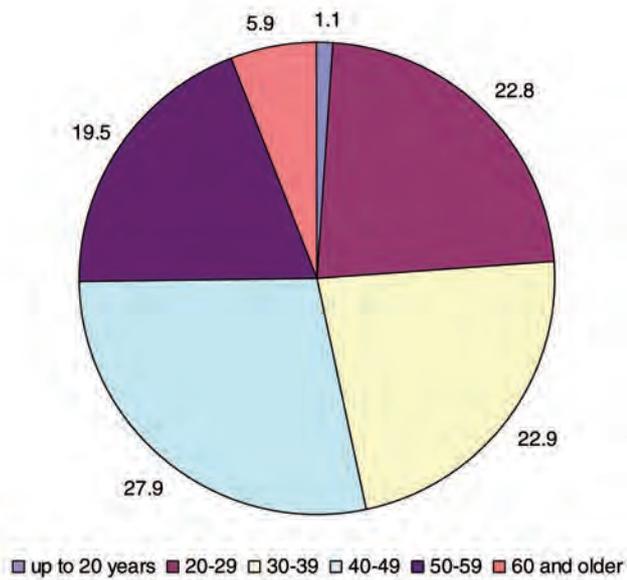


Figure 2.2.3.1.3 shows the employment figures in this industry by gender. In the culture and art sector the number of men employed barely exceeded 30 per cent.

Figure 2.2.3.1.3. Employment by Gender in the Culture and Art Sector in 2004 (% of total)

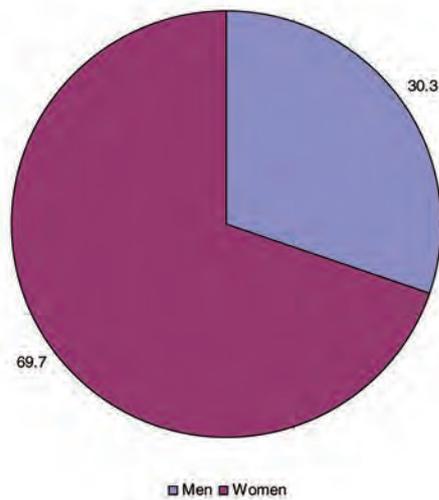


Figure 2.2.3.1.4. Employment in the Printing and Publishing Sector in 2004 (% of total)

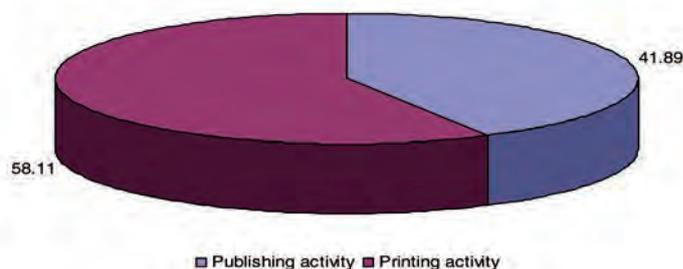
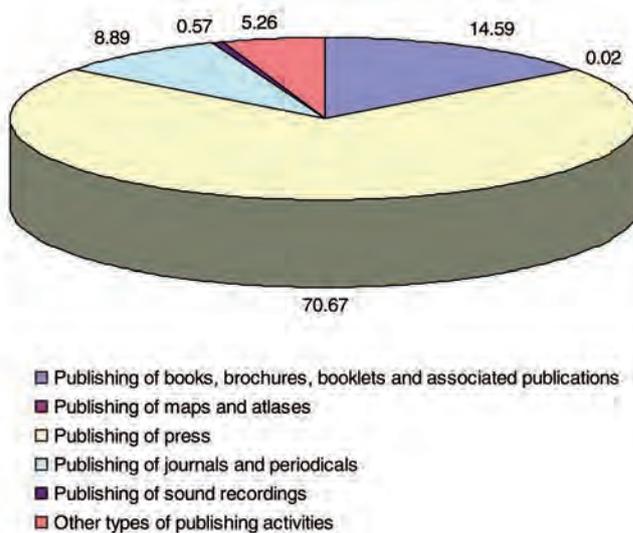


Figure 2.2.3.1.4 shows that printing was the major employer in this sector, providing more than 58 per cent of jobs in the industry.

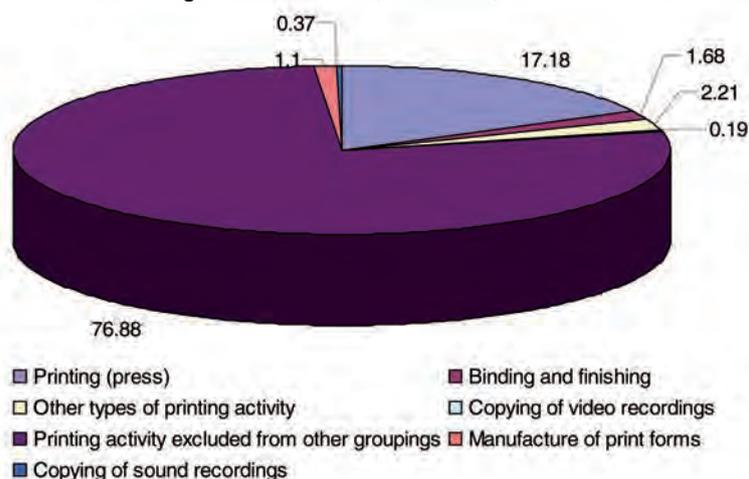
Data on the employment composition of the publishing activity is given in figure 2.2.3.1.5.

Figure 2.2.3.1.5. Employment in the Publishing Sector in 2004 (% of total)



It can be seen from the above data that most of the jobs were in press and publishing (7.067 per cent). The publishing of books, brochures, booklets and other types of associated products accounted for less than 15 per cent, and magazine publishing about nine per cent.

Figure 2.2.3.1.6. Employment in the Printing Sector in 2004 (% of total)



Information on the make up of employment in the printing sector is given in figure 2.2.3.1.6.

The printing of newspapers accounted for only 17.18 per cent: the major share of jobs in this industry was found in the printing sector not included in other groups (more than 61,000 jobs), accounting for 76.88 per cent of all jobs in the printing industry.

Other types of printing activity and replication of information carriers had, up to the date of the study, been insignificant in the generation of jobs and the assurance of future employment in the industry.

2.2.3.2. Contribution of the Interdependent Industries to Employment in 2004

In 2004, 502.9 thousand jobs were created in the interdependent industries, exceeding by 10 per cent the total number of jobs in all copyright-based industries.

Figure 2.2.3.2.1 illustrates the employment composition in this sector.

It has been seen that about 55 per cent or 279,000 of all jobs were provided by the manufacture of optical, photographic and motion picture equipment. A sizeable role was also played by:

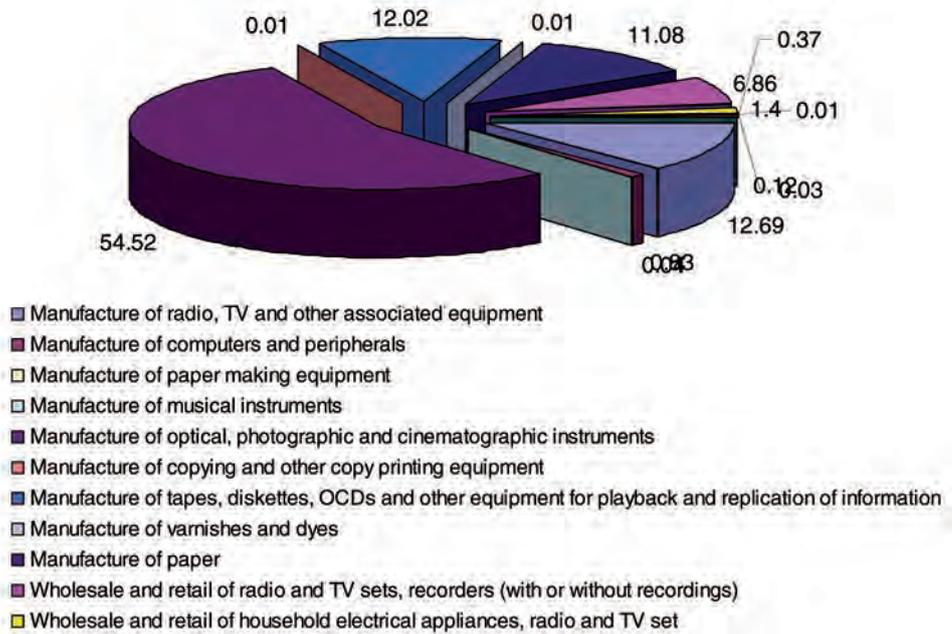
- the manufacture of radios, TVs and other associated equipment (12.69 per cent or 64,000 jobs);
- the manufacture of tapes, diskettes, CDs and other equipment for playback and replication of information (12.02 per cent or 60,000 jobs);
- the manufacture of varnishes and dyes (11.08 per cent or 56,000 jobs);
- paper manufacture (6.86 per cent or 35,000 jobs).

The employment share of other industries and types of activities in the interdependent industries did not exceed 2 per cent.

It is important to point out that during the research it was not possible to obtain all the required data on employment composition, in particular the number of jobs in the sector relating to manufacture of copying and other copy printing equipment.

Figure 2.2.3.2.1 gives the shares of the individual subsectors in the total number of jobs for this group.

Figure 2.2.3.2.1. Employment in the Interdependent Industries in 2004



Until the date of the study, no significant role had been played by such industries as:

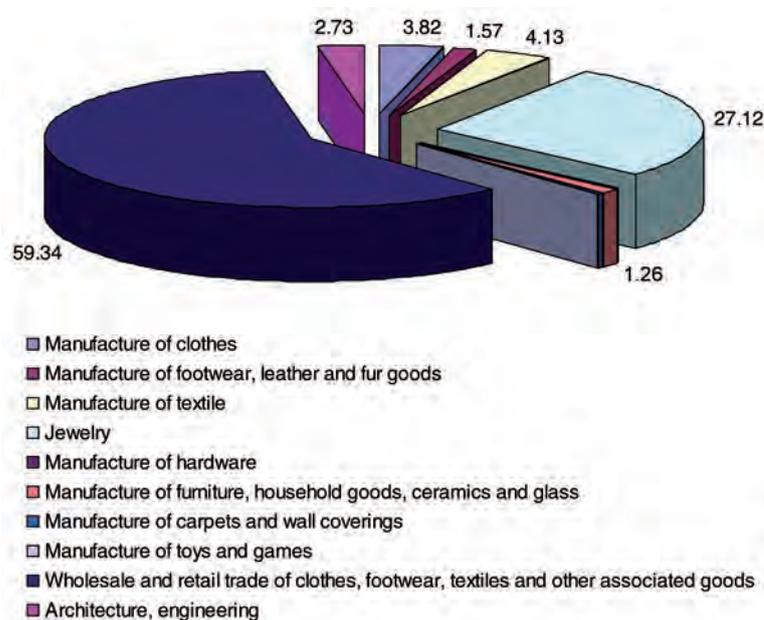
- the manufacture of computers and peripherals;
- the manufacture of paper-making equipment;
- the manufacture of musical instruments;
- wholesale activities in radio and television equipment, carriers of information (with or without recordings);
- wholesale and retail in household electrical appliances and electronics;
- wholesale and retail in photographic and optical goods;
- wholesale and retail in jewelry;
- wholesale and retail in ceramics and glass;
- wholesale and retail in stationery and office accessories.

However, low values can sometimes be due to the incomplete statistics covering employment and not included in the corresponding reporting.

2.2.3.3. Contribution of the Partial Copyright Industries to Employment in 2004

The partial copyright industries provided more than 376,000 jobs, which comprised about 8 per cent of employment in the copyright-based industries. The contribution of different types of activity and industry, especially the employment factor, is shown in figure 2.2.3.3.1.

Figure 2.2.3.3.1. Employment in the Partial Copyright Industries in 2004



The following industries were the most significant in the partial copyright sector:

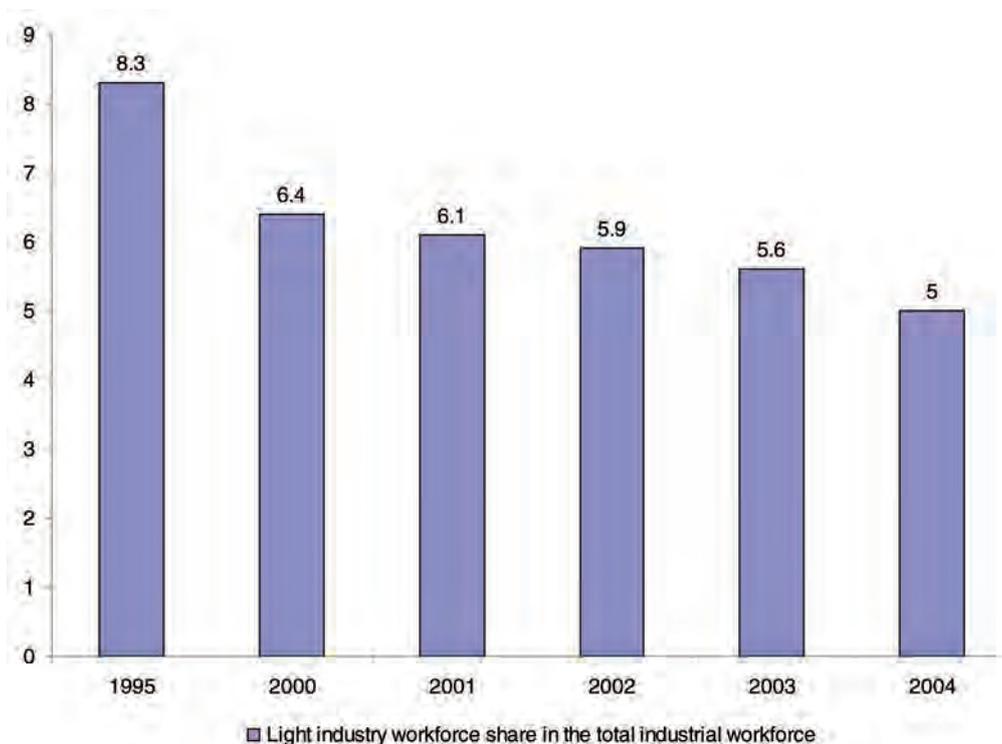
- the wholesale and retail of clothing, footwear, textiles and other associated goods (59.36 per cent or 223.38 thousand jobs);
- jewelry (27.12 per cent or 102.06 thousand jobs);
- the manufacture of textiles and other goods (4.13 per cent or 16.53 thousand jobs);
- clothing manufacture (3.82 per cent or 14.39 thousand jobs);
- architecture, engineering (2.73 per cent or 10.28 thousand jobs);
- the manufacture of furniture, household goods, ceramics and glass (1.26 per cent or 4.76 thousand jobs).

The share of each industry such as the manufacture of clothing, footwear, leather and fur goods, textiles and other goods did not exceed 5 per cent.

Bearing in mind the total reduction of the light industry share in the number of workers employed in the core industries (see figure 2.2.3.3.2), it should not be assumed that the role of these industries would substantially increase and exert greater influence on employment in the partial copyright industries in the short term.



Figure 2.2.3.2. Changes in the Light Industry Workforce in the Total Industrial Workforce 1995 to 2004 (% of total)



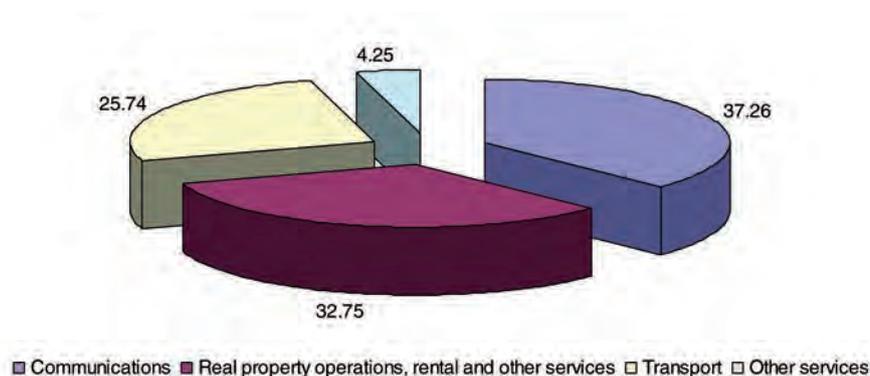
2.2.3.4. Contribution of the Non-Dedicated Support Industries to Employment in 2004

The non-dedicated support industries also noticeably contributed to employment in this sphere of the economy and generated more than 1,138 thousand jobs, comprising more than 23 per cent of all jobs in the copyright industries.

The employment composition of the non-dedicated support industries is illustrated in figure 2.2.3.4.1.

These data show that communications (37.26 per cent or 424.27 thousand jobs), real estate, rental and other services (32.75 per cent or 372.82 thousand jobs) and transport (25.74 per cent or 293.07 thousand jobs) were the main providers of employment.

Figure 2.2.3.4.1. Employment in the Non-Dedicated Support Industries in 2004

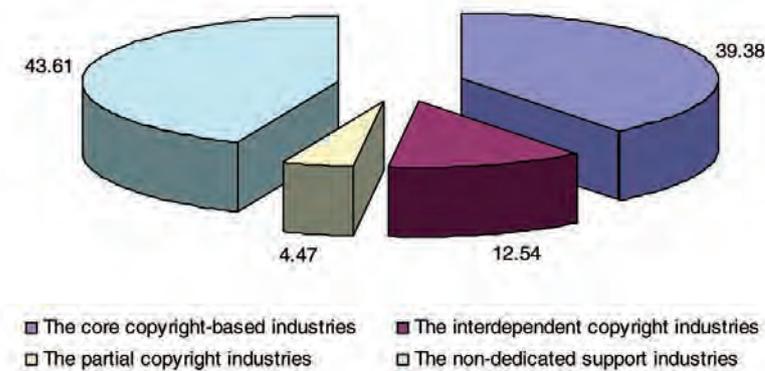


The correction factor applied to the communications industry was 40.6. This was justified by earlier remarks and by the fact that the average monthly salary in this industry exceeded the Russian average by more than 33 per cent. Since labor remuneration accounted for a significant share of GDP, it was obvious that this factor should be considered as specific to Russia when compared with other countries.

2.2.4. Contribution to GDP of Copyright-Based Industries in 2004

7.47 per cent of GDP or 1253,63 billion rubles overall in 2004 came from the copyright-based industries. Contributions from various types of activity, corresponding to the WIPO classification, are shown in figure 2.2.4.

Figure 2.2.4. Contribution of the Copyright-Based Industries to GDP of all Industries in the Russian Economy in 2004 (% of total)



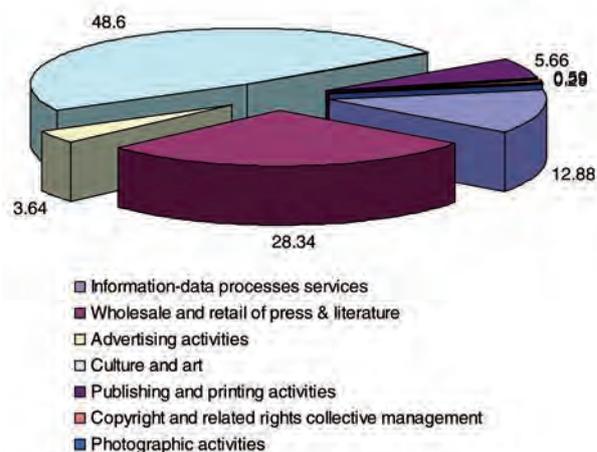
The results of the activity of the core copyright industries significantly influenced the volume of GDP (39.38 per cent). In particular, the non-dedicated support industries (43.61 per cent) substantially influenced GDP in the sector, principally the communications industry.

2.2.4.1. Contribution of the Core Industries to GDP in 2004

It was in the core industries that the most substantial share of GDP—more than 400 billion rubles—was generated, which was more than 39 per cent of the total GDP produced by all the copyright-based industries.

The GDP generated in 2004 by the core industries is represented by the main trades and types of activity in figure 2.2.4.1.1

Figure 2.2.4.1.1. GDP Generated by the Core Industries in 2004



These data show that the leading contributors to GDP were:

- culture and art (48.60 per cent or 194 billion rubles);
- wholesale and retail of books and press (28.34 per cent or 113 billion rubles);
- information–data processing services (12.88 per cent or 56 billion rubles);
- publishing and printing (5.66 per cent or 23 billion rubles);
- advertising (3.64 per cent or 15 billion rubles).

Other core industries and types of activity did not play an essential role in generating GDP, since their share did not exceed two per cent.

Since the values of indicators for this group of core industries were included in the calculations (the correction factor was 100), the total figure for GVA generated was taken into account in order to determine their effect on GDP.

Overall the amount of GVA generated by the group of core industries was more than 400 billion rubles.

2.2.4.2. Contribution of the Interdependent Copyright Industries to GDP in 2004

The interdependent copyright industries formed a substantial part of the GDP generated by the copyright-based industries. The GDP of the interdependent copyright industries comprised 127.4 billion rubles in 2004, which accounted for approximately 12 per cent of the total GVA generated in all copyright-based industries.

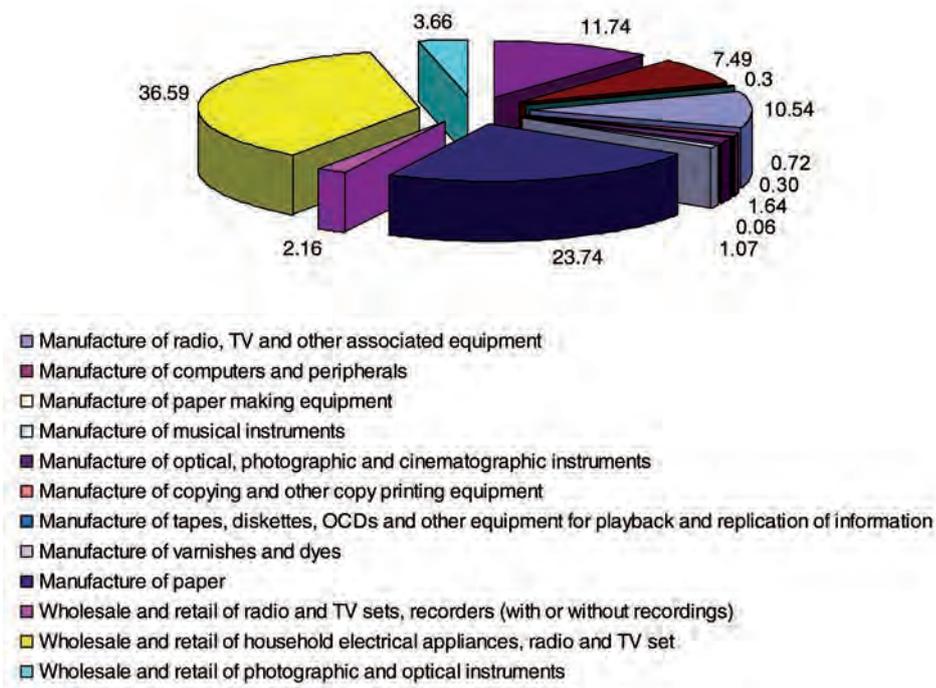
The GDP generated by the interdependent copyright industries is illustrated in figure 2.2.4.2.1.

These data show that the main contribution to GDP by the interdependent industries was:

- wholesale and retail of household electrical appliances, radio and TV sets (36.59 per cent or 46.6 billion rubles);
- paper manufacture (23.74 per cent or 30.7 billion rubles);
- wholesale and retail of jewelry (11.74 per cent or 14.9 billion rubles);
- manufacture of radios, TVs and other associated equipment (10.54 per cent or 13.4 billion rubles);
- wholesale and retail of ceramics and glass (7.49 per cent or 9.5 billion rubles).

GDP generation in other subsectors contributed 5 per cent or less and did not have a substantial impact on production and the total growth of GDP in the economy.

Figure 2.2.4.2.1. GDP Generated by the Interdependent industries in 2004

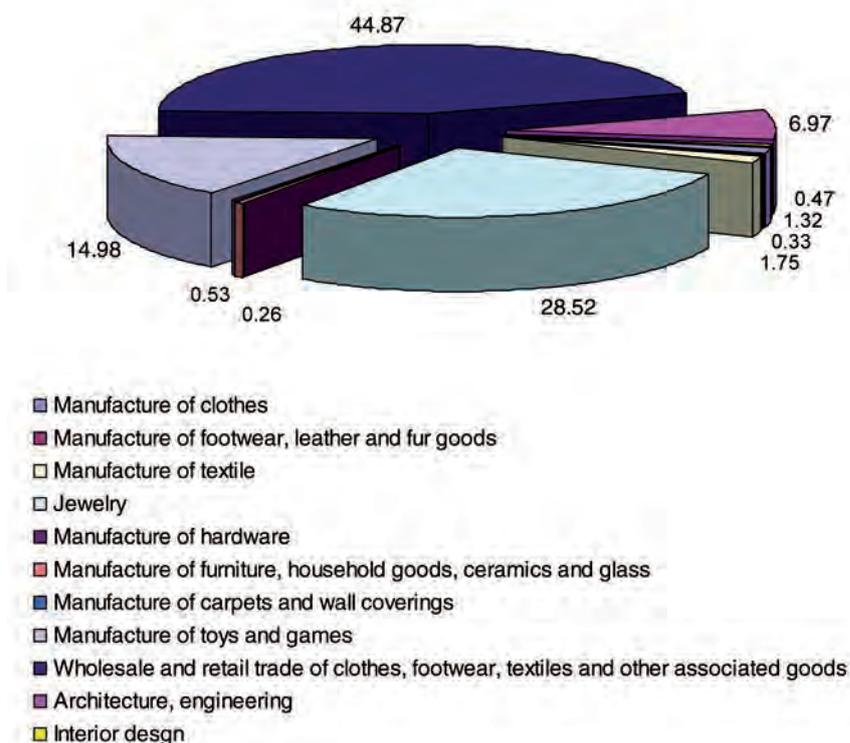


2.2.4.3. Contribution of the Partial Copyright Industries to GDP in 2004

The GDP generated by the partial copyright industries was more than 45 billion rubles and amounted to about 4.5 per cent of the total GVA generated by all copyright-based industries.

Figure 2.2.4.3.1 shows the composition of GDP in this sector of the economy.

Figure 2.2.4.3.1. GDP Generated by the Partial Copyright Industries in 2004



These data show the contribution of this sector to GDP:

- wholesale and retail of clothing, footwear, textiles and other associated goods (44.87 per cent or 20.4 billion rubles);
- jewelry (28.52 per cent or 12.9 billion rubles);
- manufacture of toys and games (14.98 per cent or 6.8 billion rubles);
- architecture, engineering (6.97 per cent or 3.2 billion rubles).

The share of the other industries included in this group was slightly above one per cent and was not considered significant.

The share of other types of economic and manufacturing activities was not substantial, since it did not exceed a one per cent contribution to the total volume of GDP in this sector.

2.2.4.4. Contribution of the Non-Dedicated Support Industries to GDP in 2004

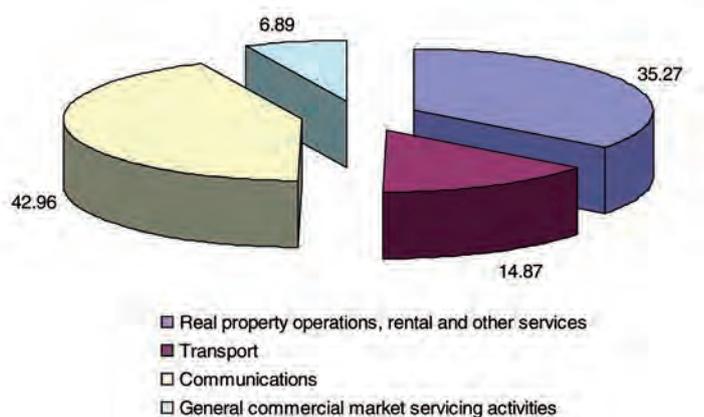
The contribution of the non-dedicated support industries to GDP in 2004 was higher than that of the partial copyright industries: over 443 billion rubles, which exceeded by 43 per cent the total volume of the GDP generated by all the copyright-based industries.

Figure 2.2.4.4.1 shows the contribution of the non-dedicated support industries to GDP.

The most important contribution to GDP in the non-dedicated support industries came from communications and real estate operations, rental and other services.

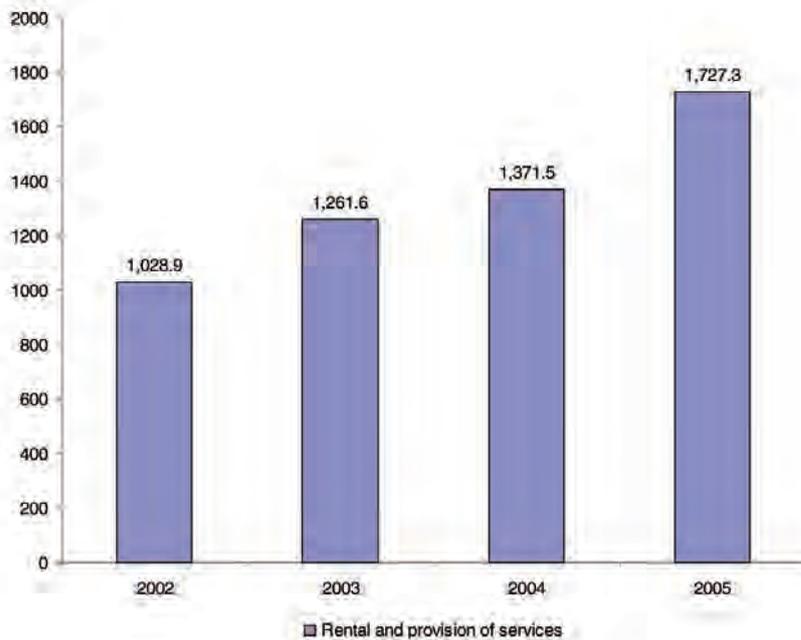
The main contribution was provided by communications (42.96 per cent), real estate operations, rental and other services (35.27 per cent) and transport (14.87 per cent).

Figure 2.2.4.4.1. Contribution to GDP of the Non-Dedicated Support Industries in 2004



This situation was fully justified due to the permanent growth of GDP produced through real estate operations, rental and other services and the transport and communications industries (figures 2.2.4.4.2 and 2.2.4.4.3).

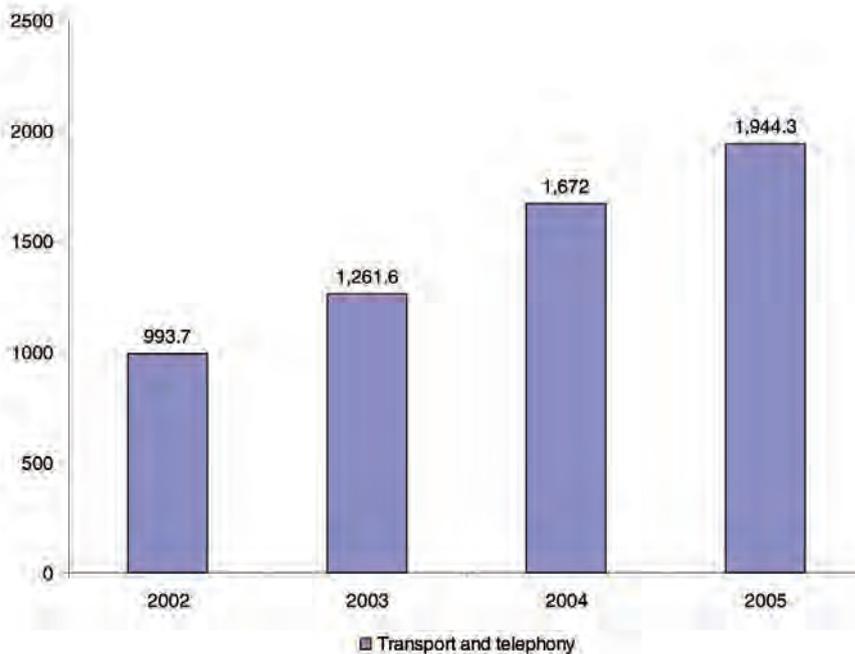
Figure 2.2.4.4.2. GDP Contribution of Real Estate Operations, Rental and Other Services in 2002-2005 (billions of rubles)



This figure shows that the GDP generation in real estate operations, rental and provision of services industry increased almost 1.7 times in 2002-2005.

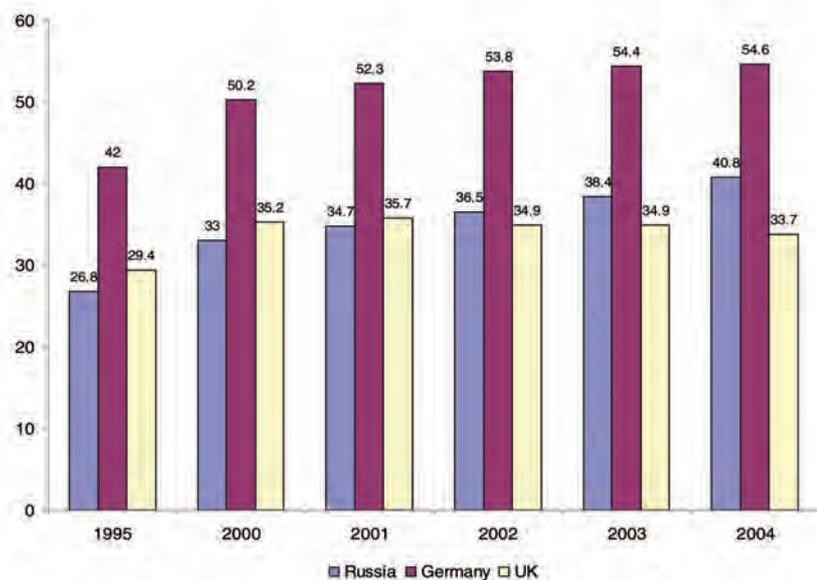
A higher growth rate of GDP was registered in such activities as transport and communications, where it increased almost twofold compared with 2002.

Figure 2.2.4.4.3. GDP Contribution from Transport and Telephony in 2002-2005 (billions of rubles)



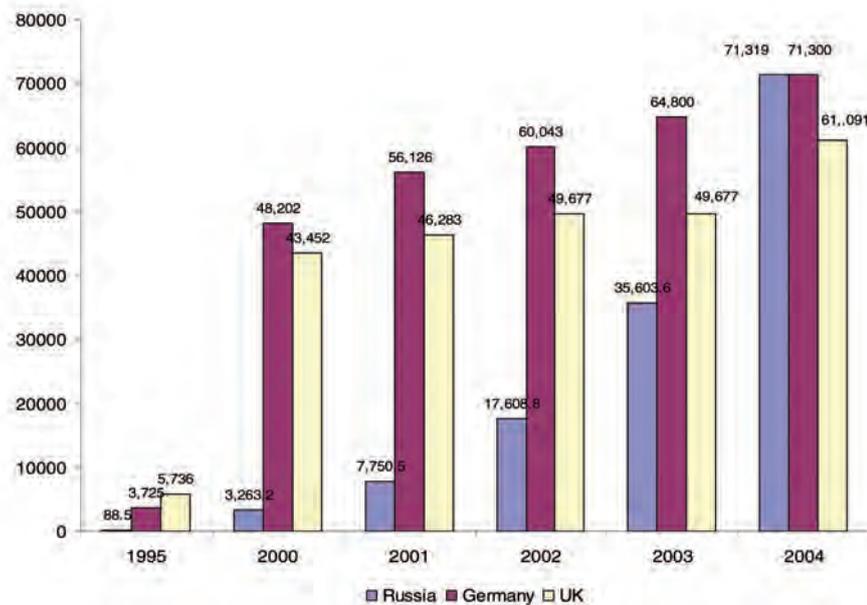
Data on the development of the communications industry compared with the developed countries of Europe (Germany and the UK) are given in figure 2.2.4.4.4.

Figure 2.2.4.4.4. Telephones Installed or Access to Them 1995-2004 (millions of units)



From the chart it can be seen that, while in Germany and the UK growth in the total number of telephones had practically stopped in 2001, in Russia it continued and showed a tendency to increase.

Figure 2.2.4.4.5. Number of Subscribers to Mobile Communication Services ('000)⁶



Even higher rates of growth were demonstrated by the mobile phone industry (see figure 2.2.4.4.5).

It is clear that the number of mobile telephone network subscribers increased in Russia during the period under analysis more than 800-fold, while in Germany it was 19-fold and in the UK 11-fold.

⁶All data except those for Russia were supplied by the International Telecommunication Union.

At the same time the number of mobile phone subscribers per 1,000 of the population in 2004 was equal to 864 in Germany, 1,022 in the UK, and only 497.1 in Russia. This showed that market growth in mobile communications was likely to double.

Besides showing strong growth, the communications services market was the most profitable, which is seen in table 2.2.4.4.2.

The average level of profitability in the communications industry in 2004 was more than 32 per cent, which determined the recalculation of the correction factor. It is clear that the share of material costs (interim consumption) in this sub-sector did not exceed 20 per cent. It was the low level of interim consumption that gave rise to such a high level of profits in this sub-sector. The level of profitability in the communications sector was practically eight times higher than the average for this group of industries. This is why the recalculation of the correction factor for the communications sector, taking account of conditions unique to Russia, appears justified.

The substantial contribution of the sub-sector relating to the real estate operations, rental and other services to GDP within this group was connected to the generally high level of GDP generated in the given sector. It should be pointed out that the high growth rate of production of services in this sub-sector was noted, with individual types of services (such as consultancy services) being closely associated with copyright. In view of the lack of data to confirm this, no recalculation of the correction factors was made.

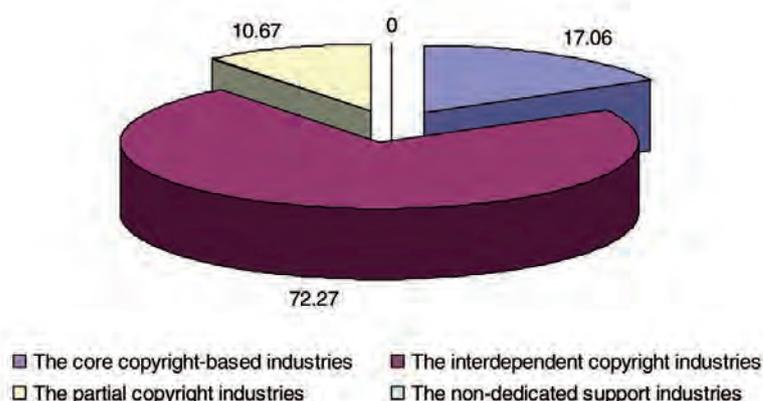
2.2.5. Contribution to Foreign Trade of Copyright-Based Industries in 2004

The contribution to foreign trade in 2004 was 7.21 per cent or 20,228.15 million US dollars. Not all industries influenced the level of this indicator since, due to the absence of data, our calculations did not take into account the export and import operations of the non-dedicated support industry.

The figure shows that the interdependent copyright industries most substantially contributed to foreign trade turnover indicators (72.27 per cent). The contribution of the partial copyright industries was 10.67 per cent, and the contribution of the core industries was 17.06 per cent.

This demonstrated that goods and services in the category of exports and imports provided by the core industries had not had a substantial influence, and that development of this sector would promote a significant increase to this effect.

Figure 2.2.5. Contribution of the Core Copyright Industries to Foreign Trade in all Sectors in 2004 (% of total)



The following analysis of the contribution to the Russian economy by each of the four groups (core, interdependent, partial and non-dedicated support industries) shows which subgroups, in accordance with NACE, were analyzed, and the way their contribution to the Russian economy was made up.

2.2.5.1. Contribution of the Core Copyright Industries to Foreign Trade in 2004

The total volume of foreign trade for the core industries in 2004 was 3,450.2 million US dollars, consisting of exports of 1,025.8 million US dollars and imports of 2,424.4 million US dollars.

Figures 2.2.5.1.1 to 2.2.5.1.2 show the make-up of exports and imports for the core copyright industries.

The following types of economic activities are included in the exports of the core copyright industries, based on customs statistics: export of photographic and cinematographic instruments; books, newspapers and magazines; musical instruments and their parts; services in the sphere of information and computer technologies; royalties or other payments; services in the sphere of culture and leisure, and also exported artistic creations.

Figure 2.2.5.1.1. Exports of the Core Industries in 2004 (millions of US dollars)

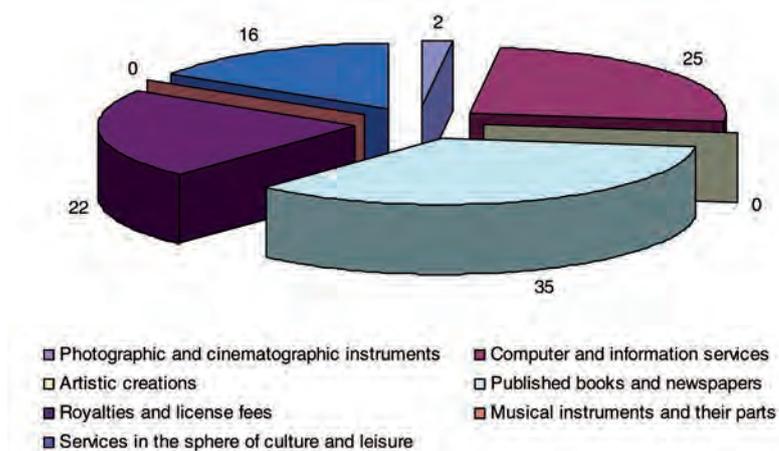


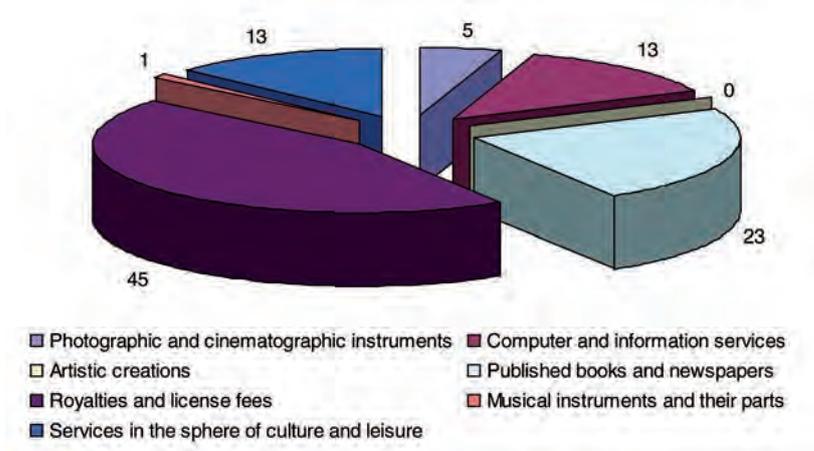
Figure 2.2.5.1.1 shows that the main exports of the core group in 2004 were printed products (34.85 per cent) and provision of computer and information services (24.96 per cent). Royalties and license fees (22.22 per cent) and services in the sphere of culture and leisure (15.98 per cent) also played an important role.

Exports of artistic creations, musical instruments and photographic and cinematographic products in 2004 were not significant, since their share did not exceed two per cent of the total volume in this sector. Imports for the core industries accounted for almost twice the volume of exports.

There is only one similarity between exports and imports for the core industries: the share of musical instruments and artistic creations did not exceed one per cent of foreign trade in this sector.

The most important role in the imports of the core industries was that of royalties and license fees paid on the acquired copyright and related rights (45.12 per cent), and also by imported printed publications (22.94 per cent).

Figure 2.2.5.1.2. Imports for the Core Industries in 2004 (millions of US dollars)

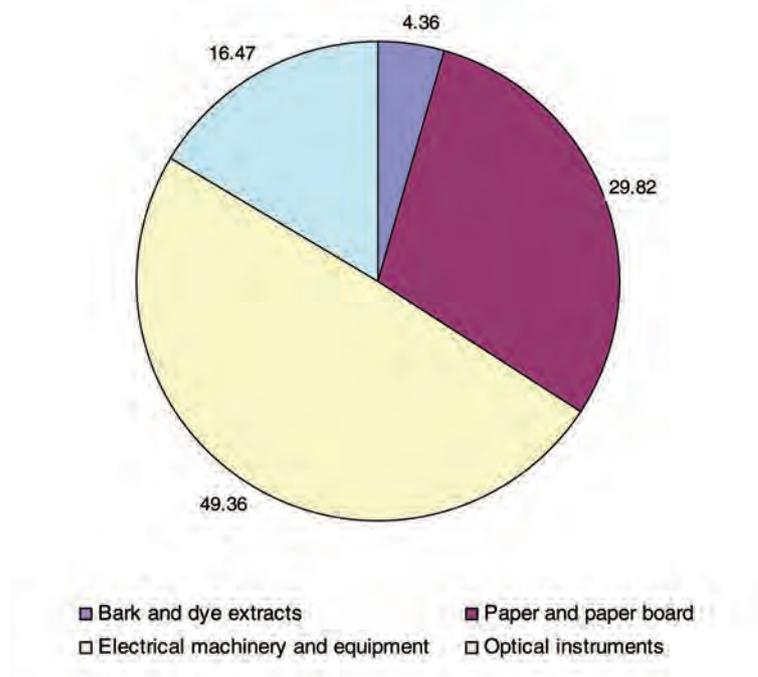


2.2.5.2. Contribution of the Interdependent Copyright Industries to Foreign Trade in 2004

The total contribution of the interdependent industries to foreign trade was 14.6 billion US dollars, including exports of the interdependent industries – 4,095.69 million US dollars, and imports – 10,523.5 million US dollars.

Figure 2.2.5.2.1. gives the export contribution of the interdependent industries.

Figure 2.2.5.2.1. Exports of the Interdependent Industries in 2004

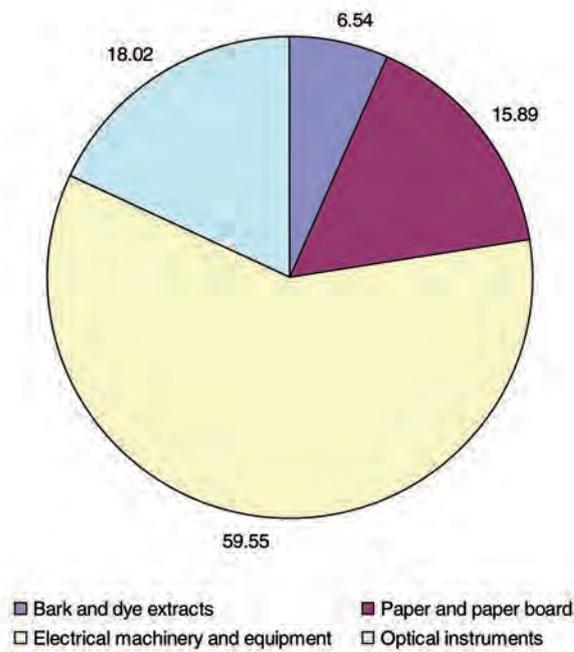


This figure shows that the main contribution to foreign trade exports was made by the following:

- electrical machinery and equipment (related to the products of the interdependent industries) – 49.36 per cent;
- paper and paperboard – 29.82 per cent;
- optical instruments – 16.47 per cent.

Figure 2.2.5.2.2 shows the contribution of the interdependent industries to foreign trade in 2004.

Figure 2.2.5.2.2. Contribution of the Interdependent Copyright Industries to Foreign Trade in 2004



This figure shows that the main contribution to foreign trade imports was as follows:

- electrical machinery and equipment (related to the products of the interdependent industries) – 59,55 per cent;
- paper and paperboard – 15.89 per cent;
- optical instruments - 18.0 per cent.

Section 3. International Comparisons

This research would be incomplete if it did not include international comparisons for all or some of the figures used. Such comparisons within the framework of this report have been limited, as this is the first research of its kind to be carried out in Russia, whilst in many other countries this has been done on a regular basis since 1998.

Comparisons in the present report were made using the results of similar research carried out in 2006 in the US (data for 2004). As shown above, based on similar research in different countries carried out under the guidance of WIPO, in 2004 the contribution to the economy made by the copyright industries amounted to 4.8 per cent of GDP in Finland; 5.8 per cent of GDP in the Netherlands and 7.75 per cent of GDP in the US. According to our research this index is equal to 6.06 per cent of GDP in Russia.

However, detailed computations and estimates made in the US for 2004 enabled us to significantly adjust the estimates obtained on the basis of preliminary evaluations. According to the 2006 annual report on the influence of copyright industries on the US economy, the contribution of the copyright industries to GDP in the US equaled 11.09 per cent, which was nearly twice as high as the corresponding figure for Russia.

Research on the significance of copyright for the US economy is carried out on a regular basis by Economists Incorporated for the International Intellectual Property Alliance, and the results are published in the form of reports.

The 2006 report on similar research in the US seems to be commensurate with this research in terms of the period studied. Data from other countries carried out earlier are given to illustrate the growth rates of certain copyright-based industries.

Table 3.1. Comparison of the Weight of Copyright Industries in GDP in 2004 (Russia and the US)

	Index	Russian Federation		US (billion dollars)
		(billion rubles)	(billion US dollars)	
1	Total GDP	16,779.00	1,410.70	11,734.30
2	GDP for copyright-based industries	1,016.10	85.46	1,300.77
3	Share of GDP for copyright-based industries as % of the total	6.06	6.06	11.09
4	GDP in core copyright industries	400.11	33.65	760.49
5	Share of GDP created in primary copyright industries as % of the total	2.38	2.38	6.48

As can be seen from Table 3.1, the share of GDP contributed by the copyright industries constituted 6.06 per cent of the Russian total, whilst in the US it was above 11 per cent.

The share of GDP created in industries directly related to copyright and included into the core industries was only equal to 2.38 per cent in Russia, whilst in the US this figure amounted to 6.5 per cent.

The above shares in absolute figures (calculated in billions of US dollars) clearly demonstrate the difficulty in comparing the volume of value added produced in these industries. It should also be noted that Russian GDP calculated in billions of US dollars was virtually 10 times lower than of the figure for the US.

Table 3.2. Comparison of the Weight of Copyright Industries in Employment in 2004 (Russia and the US)

	Index	Russian Federation ('000 workers)	USA ('000 workers)
1	Total employment	65,900.00	131,435.00
2	Employment in copyright-based industries	4,900.27	11,206.60
3	Share of employment in copyright-based industries as % of total	7.43	8.53
4	Employment in core copyright industries	2,882.43	5,344.00
5	Share of employment in core copyright industries as % of total employment	4.37	4.07

Comparing the respective shares in the total volume of employment of the two countries showed a more favorable ratio: the numerical values of the share of employment were not only close, but sometimes the figure for Russia was even higher than that for the US. Thus, in Russia the share of employment in the core industries was equal to 4.37 per cent of the total, whereas in the US this share was only slightly higher than four per cent.

However, the comparison of GDP per employee evidences the low productivity and the inefficiency of labor in Russia.

Thus, in Russia, each worker created 254.6 thousand rubles or 21.39 thousand US dollars of added value, whereas in the US this figure amounted to 89.3 thousand US dollars.

In Russia, labor productivity calculated as GDP per employee in the copyright-based industries was equal to 270.3 thousand rubles or 17.4 thousand US dollars. The same calculation in the US was 116.1 thousand dollars.

In key copyright industries, labor productivity totaled 138.8 thousand rubles or 11.7 thousand US dollars; in the US it was 142.3 thousand dollars.

Table 3.3. Comparison of GDP per Employee in Copyright-Based Industries in 2004 (Russia and the US)

	Index	Russian Federation		US ('000 US dollars)
		('000 rubles)	('000 US dollars)	
1	GDP per employee for the economy as a whole	254.6	21.4	89.3
2	GDP per employee in copyright-based industries	270.3	17.4	116.1
3	GDP per employee in copyright-based industries as % of the total economy	1.06	0.81	1.3
4	GDP per employee in core copyright- industries	138.8	11.7	142.3
5	GDP per employee in core copyright- industries as % of the total economy	0.54	0.54	1.6

From the above data one can see that GDP in the US per employee in the copyright-based industries was 1.3 times higher than for the economy as a whole, and in key copyright industries it was 1.6 times higher.

In the Russian Federation the situation was significantly worse: while GDP per employee calculated in rubles in the copyright industries relative to the economy as a whole was 1.06, its dollar equivalent was only 0.81. In key copyright industries the above index was only 0.54.

These ratios may be interpreted as illustrating not only low productivity in the industries studied, but also their high level of involvement in the informal economy.

As a rule, in the case of concealment of real production volumes and tax earnings, the numbers employed were reflected correctly in the statistical reports, whereas data on the wages paid, tax on wages paid and the volume of products manufactured and sold were invariably underreported.

If we assumed the ratio of GDP per employee in the copyright industries in the US to be an objective and valid co-efficient, we could assume that in the Russian Federation the GDP produced per employee in the copyright industries was equal, not to 17.4 thousand dollars, but to 27.82 thousand dollars ($21.4 \times 1.3 = 27.82$), and accordingly, in the key copyright industries equal to 34.24 thousand dollars ($21.4 \times 1.6 = 34.24$).

Taking into account that the number employed in the copyright industries was 2.882.43 thousand people, and the total for the given sector was 4,900.27, we can determine the total volume of GDP, which in estimated figures could amount to 136.3 billion US dollars in the copyright-based industries, including 98.7 billion US dollars in the key copyright industries.

Table 3.4 illustrates the comparison between GDP in various sectors of the economy in Russia and the US.

Table 3.4. Comparison between GDP in Copyright-Based Industries and Other Core Industries in 2004 (Russia and the US)

	Index	Russian Federation		USA (billion US dollars)
		(billion rubles)	(billion US dollars)	
1	Total GDP	16,779.00	1,410.70	11,734.30
2	GDP of copyright-based industries	1,016.10	85.46	1,300.77
3	GDP of core copyright industries	400.11	33.65	760.49
4	Construction	833.33	70.08	549.50
5	Healthcare and social services	466.20	39.21	802.70
6	Finance and insurance	509.10	42.81	927.40

The above data clearly demonstrate the established difference between economic potential and the efficiency of its exploitation. The data also confirm comparability of GDP volumes in the key copyright industries and major economic sectors. Table 3.5 contains figures characterizing the structure of exports in some copyright-based industries in Russia and the US.

The data in this table show significant differences between Russia and the US in the export structure. The most optimistic estimate shows that the contribution of the copyright-based industries to the total volume of exports in the Russian Federation was five times lower than in the US. It can clearly be seen that in the

US exports of copyright-based industries occupied a leading place, as they significantly—by more than double—exceeded the exports of other leading US industries (1.57 times for machine-building, and for chemical and pharmaceutical industries –more than fourfold).

Table 3.5. Comparison between Exports from Copyright-Based Industries and Certain Core Industries in 2004 (Russia and the US)

	Index	Russian Federation (billion US dollars)	US (billion US dollars)
1	Some copyright-based industries	20.23	106.23
2	Chemical industry	12.0 ⁷	23.98
3	Medicine and pharmaceuticals	No data	23.98
4	Machine-building (engines, machine parts and accessories)	14.1 ⁸	67.64
5	Aircraft and related equipment	No data	42.09
6	Metallurgy	36.7 ⁹	41.98
7	Food products and livestock	3.3 ¹⁰	45.48

As regards the contribution of GDP from the copyright-based industries, the core industries occupied a dominant position, contributing more than 58 per cent of GDP.

Table 3.6. Comparison of GDP in Copyright-Based Industries and Other Core Industries in 2004 (Russia and the US)

	Index	Russian Federation		US	
		(billion US dollars)	%	(billion US dollars)	%
1	Total for industries based on copyright, including:	85.46	100	1,300.77	100
2	Core industries	33.65	39.38	760.50	58.46
3	Interdependent industries	10.71	12.54	248.59	19.11
4	Partial industries	3.82	4.47	47.23	3.63
5	Non-dedicated support industries	37.27	43.61	244.46	18.79

In Russia, the share of the core copyright industries was somewhat lower as it did not exceed 40 per cent of the GDP contributed by the copyright sector. The share of the interdependent industries (manufacture of equipment, raw materials, components, etc.) was significantly lower than in the US. This is why the development of this sector which at the time of the study was directed towards imports, could make a further impact on the growth of output in the core industries and in general all the industries in this sector. On the contrary, in Russia the share of the partial copyright industries and the non-dedicated support industries remained quite high. This phenomenon was likely to be temporary and it could be assumed that the high weight of these industries was caused by the continuing boom of the infrastructure industries in Russia. At the same time, this is a prerequisite for the future growth of GDP in the core copyright industries.

⁷ Exports to countries outside the CIS = 9.1 billion US dollars; to CIS countries = 2.9 billion US dollars.

⁸ Imports to countries outside the CIS = 8.4 billion US dollars; to CIS countries = 5.7 billion US dollars.

⁹ Imports to countries outside the CIS = 33.1 billion US dollars; to CIS countries = 3.6 billion US dollars.

¹⁰ Imports to countries outside the CIS = 1.4 billion US dollars; to CIS countries = 1.9 billion US dollars.

Section 4. Estimate of Trends of Copyright Use in Other Industries: Recommendations Aimed at Increasing its Significance to the Economy

4.1. Estimate of Trends in Copyright Use in Other Industries

The analysis of the significance of copyright in the Russian economy and the main results provided in the previous section of this study show that in spite of the recession that took place from 1995 to 2000, most copyright-based industries received a strong stimulus to development and were gradually recovering their position in the economy, demonstrating growth in output, employment and contribution to GDP.

It is important to note that some new industries and sub-sectors had emerged which at that time had not gained substantial weight in the economy, but would obviously do so in the future.

The trends appeared steady, so it was possible to assume that in the future a steady growth in the significance of copyright would be observed, which tendency was verified by structural changes in the economy.

Thus, growth in the number of enterprises and organizations as well as other economic indicators demonstrated a steady upward trend of economic significance for the copyright-based industries.

The prospects for significant growth in this sector were also determined by its contribution to GDP.

Figure 4.1. Specific Weight of Employees' Remuneration in GDP (%)

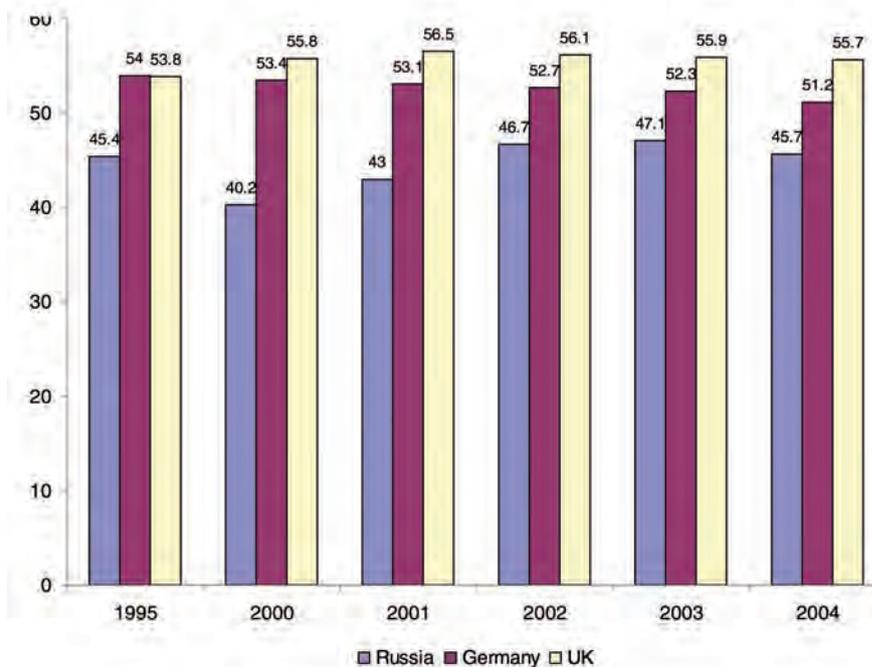


Figure 4.1 illustrates changes in the share of employees' remuneration in GDP including salaries and social insurance costs.

Taking into account that the share of labor remuneration in the overall volume of GDP in Russia was on

average 10 per cent lower than in the developed European countries, such as Germany and the UK, it can be said that consumption will play an essential part in the growth of the influence of copyright on the development of Russia's economy.

An increase in the share of labor remuneration by 10 per cent (on average) would generate additional demand for goods and services amounting to around 1,600 billion rubles, resulting in growth in the goods and services markets, and above all those related to copyright.

4.2. Recommendations for Increasing the Significance of Copyright in the Russian Economy

The results of our research gave grounds to believe that copyright in Russia is highly significant. Economic development trends allowed us to state with confidence that in the future the influence of copyright on the total growth of core indicators would increase.

Together with the above, the authors of the research offer some general recommendations aimed at increasing the significance of copyright to the Russian economy.

First, taking into consideration the importance of this research which was carried out in Russia for the first time, the unique character of the data provided in the present report and the significance of the economic development trends uncovered, the results of the research should be communicated to the general public as well as to the legislative and executive bodies including the government, president and federal assembly of the Russian Federation.

Second, based on the results of the present research and the existing methodology, it is necessary to continue studying the significance of copyright to the Russian economy to include a wider time span, namely, to carry out retrospective analyses for the period before 2004, to pursue such studies annually, and to carry out a prospective analysis which could provide significant results and recommendations for the long- and medium-term planning of the country's economic development.

Third, based on WIPO methodology, it is necessary to continue development and adaptation to Russian conditions, including for the purposes of discovering multiplying effects that could affect the significance of the results.

Fourth, in view of the need to develop research methods, it will be necessary in the future to engage in research on a permanent basis with specialists from the Federal Service for Statistics (Rosstat), and to work out a joint proposal for the Federal Service for IP, Patents and Trademarks (Rospatent) and Rosstat on the inclusion of the appropriate research into the federal statistics program with the approval of both parties.

Fifth, considering that the present research covers various aspects of economic development in general and determines the significance of copyright in particular, it is necessary to produce a manual and use the present research and its results in teaching courses at higher educational institutions in Russia, both within the framework of IP and that of economics.

Sixth, taking into consideration the high social and scientific value of the present research and its results, we suggest including it in the plan of activities of the Rospatent and WIPO preparations and the holding of an international scientific and practical conference to demonstrate the significance of copyright to the Russian economy and evaluating the prospects of its use in specific industries.

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The Economic Contribution of Copyright-Based Industries in Ukraine

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Summary

The economic importance of the copyright-based industries (CIs)¹ attracts the attention of researchers from all over the world. Research on their contribution to the Ukrainian economy has been carried out for the first time.

According to the WIPO Guide,² the copyright-based industries are:

- **The Core Copyright Industries** – which are wholly engaged in creation, production and manufacture, performance, broadcasting, communication and exhibition, or distribution and sale of works and other protected subject matter (press and literature; music, theatrical productions, opera; motion picture and video; radio and television; photography; software and databases; visual and graphic arts; advertising services; copyright collective management societies).
- **The Interdependent Copyright Industries** – which are the industries that are engaged in production, manufacture and sale of equipment whose function is wholly and primarily to facilitate the creation, production or use of works and other protected subject matter (television and radio receivers, VCRs, CD players, DVD players, cassette players, electronic game equipment and other similar equipment; computers and software, musical instruments; photographic and cinematographic instruments; blank recording material; paper).
- **The Partial Copyright Industries** – which are the industries where a portion of their activity is related to works and other protected subject matter and may involve creation, production and manufacture, performance, broadcasting, communication or exhibition, distribution and sale (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; museums).
- **The Non-Dedicated Support Industries** – in which a portion of the activity is related to facilitating broadcasting, communication, distribution or sale of works and other protected subject matter, and whose activities have not been included in the core copyright industries (general wholesale and retailing; general transportation; telephony and Internet).

The study³ showed that, in 2005, the contribution of the CIs to the gross domestic product (GDP) of Ukraine amounted to 2.85 per cent or 12,583.54 million UAH. At the same time the total contribution of the CIs constituted 1.54 per cent or 6,815.61 million UAH. The contribution of CIs to gross national production in 2005 amounted to 3.47 per cent, or 36,336.71 million UAH. The contribution of the CIs to gross production constituted 2.07 per cent, or 21,714.34 million UAH. The total number of employees in the CIs in 2005 amounted to 360,412 persons or 1.91 per cent of the total working population of Ukraine.

¹ In this study term "copyright-based industries" also covers industries based on related rights.

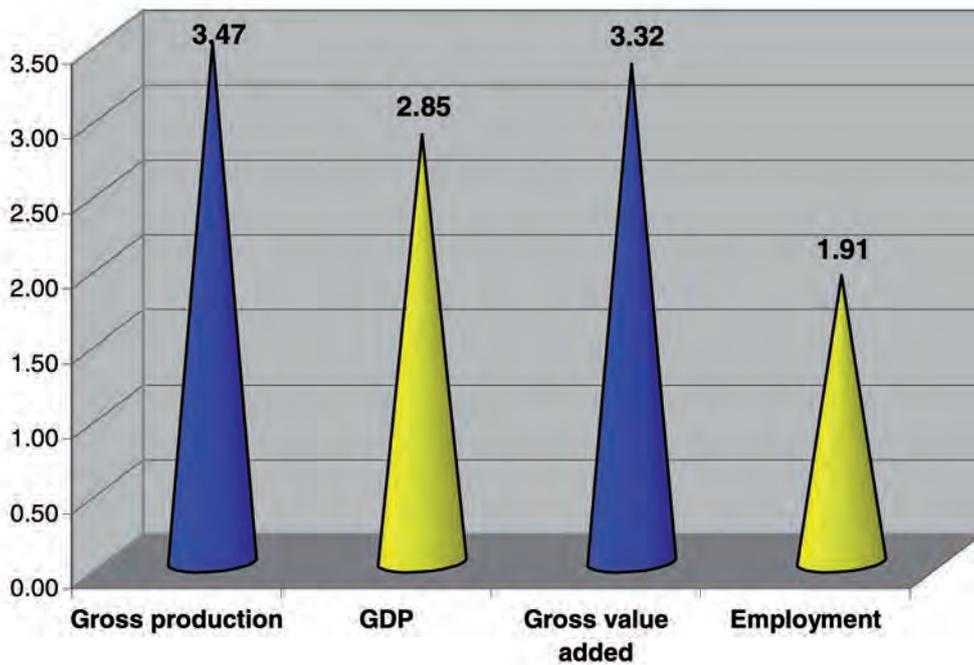
² *Guide on Surveying the Economic Contribution of the Copyright-Based Industries*, WIPO, http://www.wipo.int/copyright/en/publications/pdf/copyright_pub_893.pdf.

³ This study was conducted on the initiative of the State Department of Intellectual Property with the financial and expert support of the World Intellectual Property Organization (WIPO). It was carried out by a research team lead by Olena Saverchenko, Ph.D., Head of Division of Industrial Property Economic Regulation, State Enterprise Ukrainian Institute of Industrial Property (UKRPATENT). The members of the team were Valentin Chebotaryov, Ph.D., Deputy Chairman of the State Department of Intellectual Property, Tamara Davydenko, Head of the Copyright and Related Rights Division, State Department of Intellectual Property, Olena Shcherbakova, Head of the Division of European Integration and International Cooperation, State Department of Intellectual Property, Oleksiy Stolyarenko, Senior Specialist in the Copyright and Related Rights Division, State Department of Intellectual Property, Prof. Volodimir Mihailov, Director of the Research Institute of Statistics, State Statistics Committee of Ukraine, and Igor Bulkin, Ph.D., the H.M. Dobrov Center for Scientific and Technological Potential and Science History Studies.

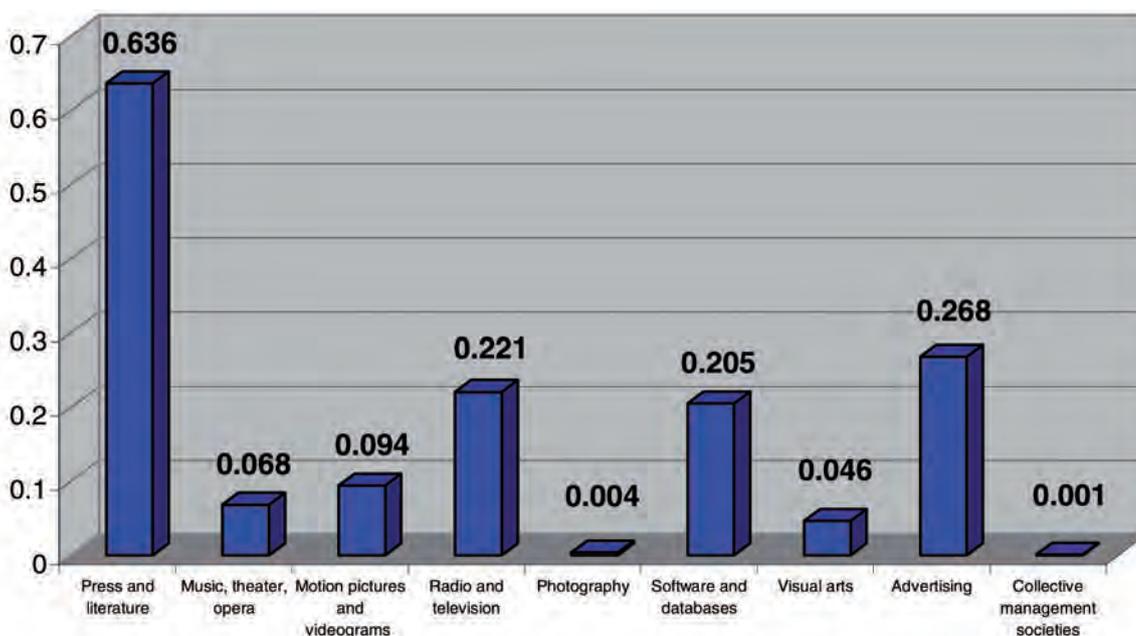
WIPO consultants were international experts Stephen E. Siwek and Dr. Dimiter Gantchev, Director, Creative Industries Division of WIPO. The study was carried out in close cooperation with the State Statistics Committee of Ukraine, the State Tax Administration of Ukraine, the National Bank of Ukraine, and the Ministry of Culture and Tourism of Ukraine.

The total number of employees in CIs in 2005 was equal to 219,495 persons, or 1.16 per cent of the total working population in Ukraine.

Economic Indicators of the Copyright-Based Industries in 2005 (%)

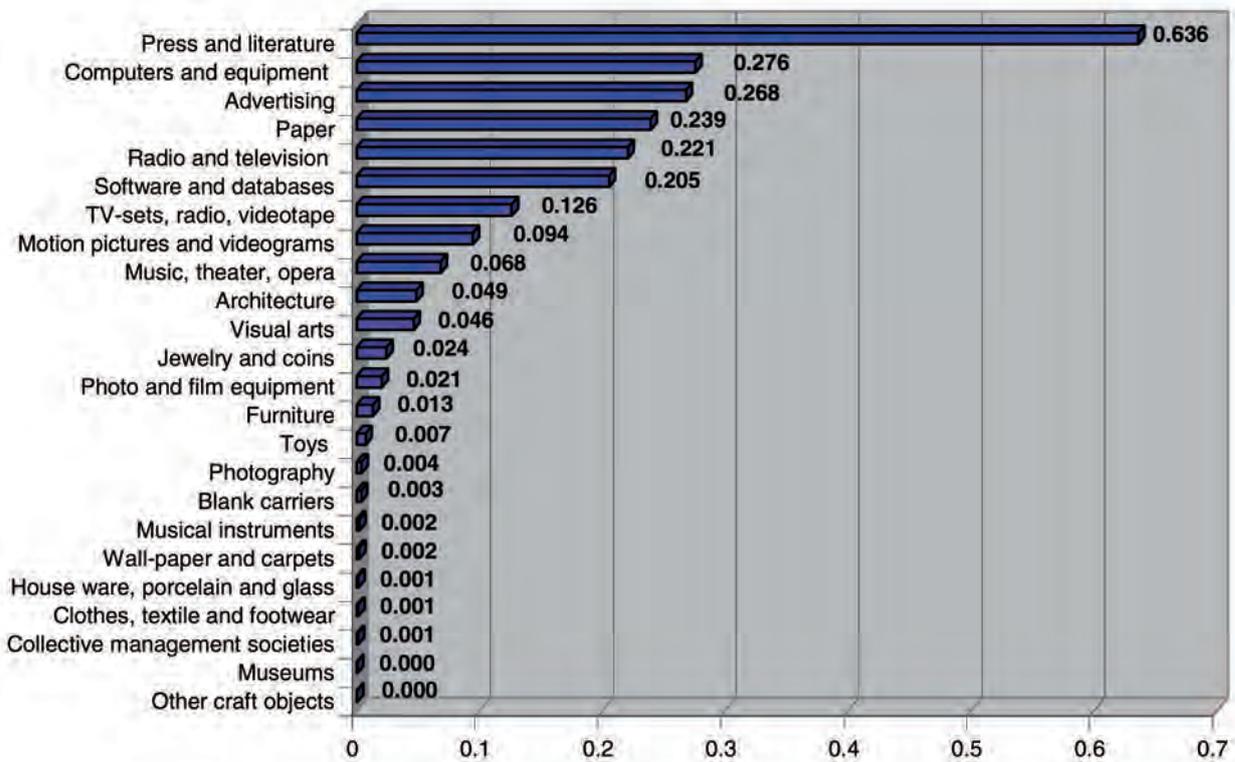


Contribution of the Core Industries to Ukrainian GDP in 2005 (%)



Considering the contribution of the core industries to Ukrainian GDP, it should be noted that the leading sector was press and literature, the value added of which comprised 0.6 per cent of Ukrainian GDP, *i.e.* 2,807.57 million UAH, or 41.2 per cent of the aggregate value added of the core industries.

Contribution of the Copyright-Based Industries to GDP in 2005 (%)



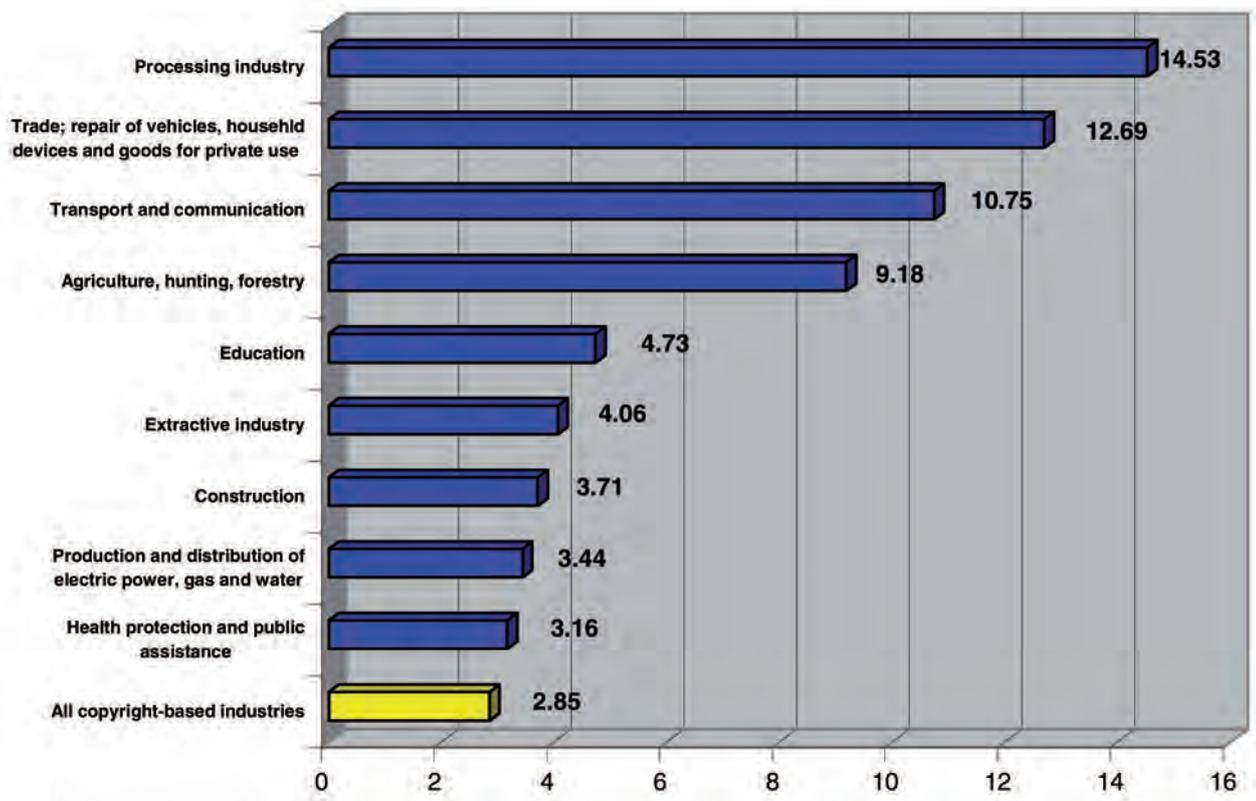
The CI sectors making the highest contribution to GDP were press and literature (0.636 per cent), computers and equipment (0.276 per cent) and advertising (0.268 per cent). By analyzing and combining the economic contribution of CIs in accordance with their dependence on copyright and related rights, we obtained the following data: press and literature and paper—0.88 per cent of GDP; radio and television with motion picture and video, music, theater, opera, TV and radio receivers and videotape recorders—0.51 per cent of GDP; software and database with computers and equipment—0.48 per cent of GDP.

Comparison with Other Sectors of the Ukrainian Economy

Although the CIs are not the main industries in Ukraine they are important for the country's economy. In 2005, their contribution was equal to 2.85 per cent and thus they may be compared with such important sectors as construction (3.71 per cent), production and distribution of electric power, gas and water (3.44 per cent), health protection and public assistance (3.14 per cent). The CIs constitute nearly 31 per cent of the contribution of the agriculture, hunting, and forestry sector; 77 per cent of the contribution of the construction sector; 70 per cent of the contribution of the extractive industry sector.



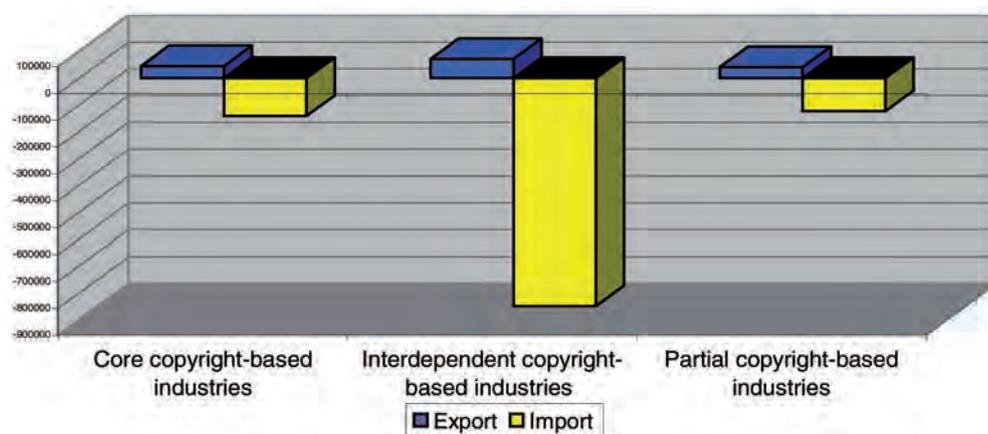
Contribution of the Copyright-Based Industries to GDP in Comparison with Other Sectors of the Economy (%)



Foreign Trade

The export value of goods related to CIs amounted to 157,269.41 thousand US dollars⁴ in 2005 or 0.46 per cent of the total exports. The import value of goods related to copyright-based industries was equal to 1,112,690.1 thousand US dollars in 2005 or 3.08 per cent of the total volume of imports. The foreign trade deficit for the CIs amounted to 955,420.69 thousand US dollars or 51.5 per cent of the total trade deficit. Thus, it can be concluded that imports of these goods are around seven times greater than their exports.

Foreign Trade in Goods of the Copyright-Based Industries in 2005 (%)

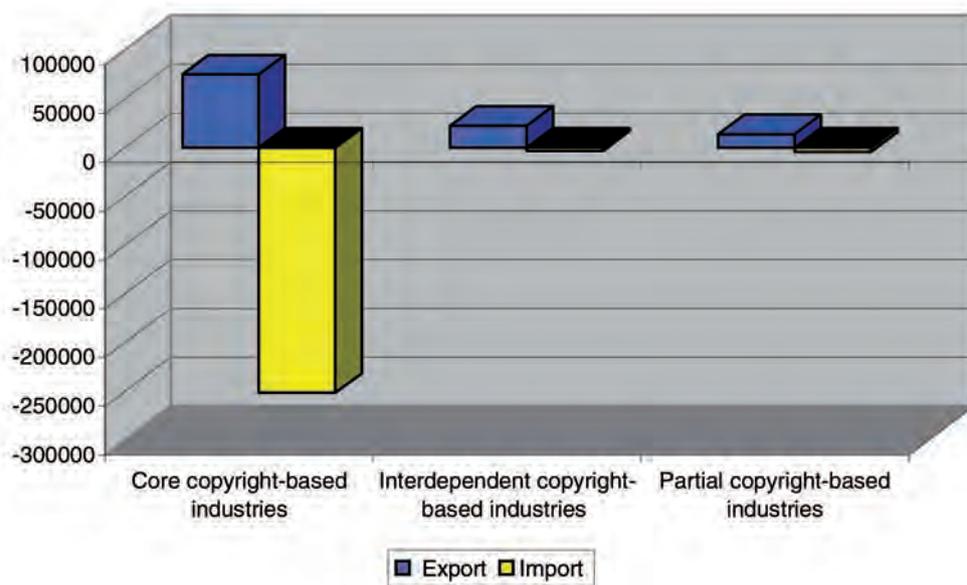


Exports of the CIs amounted to 110,612.67 thousand US dollars in 2005 or 1.80 per cent of total service exports. The total share constituted 259,176.41 thousand US dollars or 8.90 per cent of the total volume of service imports.

⁴The value of goods and services in the Ukrainian system of statistics for foreign trade is given in US dollars.

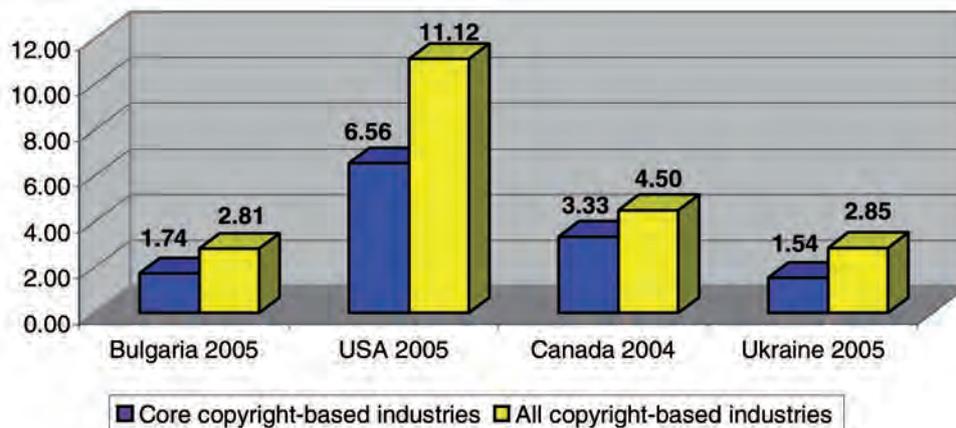
When considering the core copyright-based industries in the sphere of foreign economic activities, it is important to note that they are responsible for 74,909.21 thousand US dollars of service exports from Ukraine or 1.22 per cent of the total volume of service exports. At the same time, the section relating to the creation of software leads in the export of services and is valued at 28,603.68 thousand US dollars or 0.47 per cent of the total volume of service exports. It must be noted that the industries related to software creation are developing fast, which is why the sections relating to consultation services for informatization issues, creation of software, databases and data processing constitute almost 50 per cent of the exports of all core copyright-based industries, or 0.55 per cent, and amount to 33,620.05 thousand US dollars. The import share of these industries is equal to 124 175.17 thousand US dollars or almost half the imports of CIs and 4.27 per cent of the total volume of service imports.

Services of the Copyright-Based Industries in 2005 ('000 US dollars)



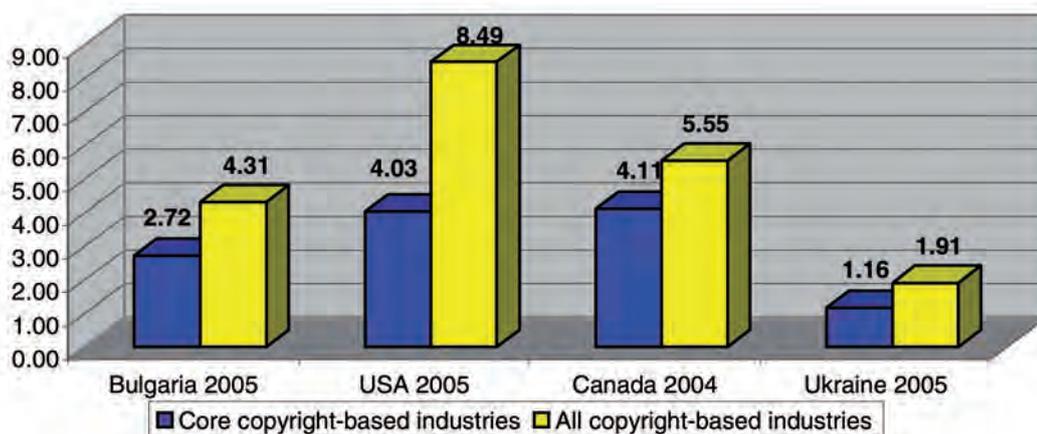
International Comparisons

Contribution of the Copyright-Based Industries to GDP in Several Countries (%)



If we compare the contribution of the total CIs to GDP in Ukraine and the US for 2005, it can be seen that the indicator for the US is four times higher than in Ukraine. If we make the same comparison between Canada and Ukraine, the difference is about 1.5 times. The contribution of CIs to GDP in Ukraine and Bulgaria is almost the same, the differences being insignificant.

Contribution of the Copyright-Based Industries to Employment in Several Countries (%)



The number of employees in all CIs is around twice as low as in Bulgaria, about three times lower than Canada and about 4.5 times lower than the US.

To sum up our research we found that:

- 1) The CIs are a very important sector of the Ukrainian economy, which is presently thriving and needs relevant state regulation and support.
- 2) A fast-growing information society deserves continuous development in legislation and ways to implement it. Inconsistency between legislation and modern conditions could be a serious obstacle to the rapid development of the CIs.
- 3) The amount of financing for art and culture constituted just 0.12 per cent of the budget in 2005, which is much lower than the contribution of 1.34 per cent the cultural industries made to GDP. An increase in state funding for these industries, together with an improvement in financing mechanisms, are necessary measures for their development and growing influence on the economy.
- 4) The national system of verification of the CIs needs improvement. We need to apply the approach of the WIPO methodology to Ukraine, to include the necessary changes to the Ukrainian system and to provide for annual research into their economic influence in the national statistical research plan.

It is also necessary to elaborate the method of evaluation of the economic influence of industries which provide distance and online services.

- 5) Infringements of copyright and related rights are also among the main factors preventing the development of CIs and formation of a national culture. More effective measures to combat piracy in the field of copyright and related rights would assist the development of these industries and the creation of additional national cultural products.

- 6) Effective enforcement is necessary in copyright and related rights to continue carrying out:
 - professional training of the representatives of the law-enforcement agencies, the judiciary, prosecutors' institutions and specialized professional lawyers;
 - campaigns to increase public awareness of copyright and related rights.
- 7) The CIs in Ukraine do not use the new digital opportunities for the development and distribution of their products effectively. Suitable conditions must be created and the representatives of these industries encouraged to use the new technologies. This will enable a wider audience to access copyright products and lower the level of piracy.

We emphasized the positive trend in the development of the CIs and their significance for the Ukrainian economy and we consider that further research should be carried out, the main purpose of which should be the elaboration and effective implementation of state policy in the sphere of copyright and related rights.

Chapter 1. Introduction

1.1. The Importance of Assessing Copyright

Georg Wilhelm Friedrich Hegel said: "It is impossible to force a man to create but it is possible to create the conditions for his creative work." In the creation of conditions for the development of such work, the attitude of society plays a significant role.

The history of copyright is very interesting; it reflects the evolution of society in its interpretation and understanding of the author who is the creator of societal development. History provides examples of outstanding creative achievements as well as tragic stories of authors who were misunderstood and unappreciated by their contemporaries. This is why the field of copyright requires in-depth study.

The rapid development of technology and the global transition from an industrial society to an information society makes it very important to understand the role of industries which are based on the use of copyright and related rights. Widespread digital technologies, making possible reliable, fast and cost-effective transfer of these products anywhere in the world, turns these industries into an extremely powerful tool for economic growth and national enrichment. In particular, the *Study on the Economic Contribution of Copyright and Related Rights to the European Economy* indicates: "The shift from industrial society to information society that is dependent upon knowledge creation and the development, processing, and use of information places copyright at the centre of economic development in the twenty-first century. The copyright industries provide the central information that is used in other economic sectors of the information society."⁵

The main task of copyright and related rights is to remunerate creators for their creations, by introducing a number of exclusive rights for the use of such creations. Thus, the state must legislate to prevent the unauthorized use of these creations, by preserving their creator's right to permit the use and the right to receive remuneration. The coming into being of a copyright and related rights system is a State reaction to the failure of the market economy which makes it cheaper to copy and distribute a work than to create it.

The maintenance of a system for copyright and related rights is based on State legislation; the efficacy of a system is proportionate to the amount of resources spent on its operation. In other words, "the gross value created by copyright industries increases in accordance with the growth of the level of protection from level zero."⁶ At the same time, it is necessary to understand that limits exist when the funds spent for ensuring the protection of copyright and related rights start to exceed the contribution of the CIs to the economy, making such a system unprofitable for the State.

Conducting studies based on the economic contribution of CIs helps to understand how these mechanisms function and to raise public awareness for the creation of a favorable regime for the development of these industries as well as to increase their contribution to the national economy.

⁵ Robert G. Picard, Timo E. Toivonen, Mikko Grönlund, *The Contribution of Copyright and Related Rights to the European Economy Based on Data from the Year 2000*, Final Report, 20 October 2003 http://ec.europa.eu/internal_market/publications/docs/report-copyright-contribution_en.pdf.

⁶ *Issues in Assessment of the Economic Impact of Copyright*, Robert G. Picard, Timo E. Toivonen, Review of Economic Research on Copyright Issues, 2004, vol. 1(1), pp 27-40.

Studies have already been conducted in several countries such as Australia, Austria, Bulgaria, Canada, Finland, Germany, Hungary, Japan, the Netherlands, New Zealand, Norway, Singapore, Sweden, the UK and the US. In other countries such research is at various stages of planning and realization. Approaches varied; several countries provided only one report while others, for example Canada, the UK and the US conduct such studies on a regular basis, making it possible to draw conclusions on economic development trends in a specified industry and to define the aspects of economic policy more effectively. In several cases the researchers used different methodological approaches which, although they made international comparison of the results impossible, did create a rich methodological basis for further research.

In spite of the fact that researchers in many countries used different methodologies and obtained different results, in the majority of cases they concluded that at present the economic importance of the CIs is underestimated in national policy-making. In particular, the Hungarian study indicates: "It is generally true that in countries where economic policy-makers are aware of the economic importance of copyright industries, the development of copyright-based industries is considered a key issue among the development policies of the given country."⁷

For instance, the US research indicates: "the 2006 Report again shows that the U.S. copyright-based industries continue to be one of America's largest and fastest-growing economic sectors."⁸

Economic research, carried out under the aegis of the European Union (EU), responded to the question: "What is the aim of the assessment of the copyright contribution to the economy of EU countries?" as follows: "When the economic value of copyright is established and understood, policy makers and those producing materials subject to copyright can effectively create legal and industrial development policies that promote the development of copyright industries, protect the value of copyright subject matter after its creation, and continue to support the transition from the industrial to the information society."⁹

These conclusions were proven by the results of research in Singapore, for example, where the contribution¹⁰ of the CIs to the economy constituted 5.7 per cent¹¹ of gross domestic income (GDI); in Hungary, 6.67 per cent¹² of GDI; in the US, 11.12 per cent of GDI.

1.2. The WIPO Guide on Surveying the Economic Contribution of the Copyright-Based Industries¹³

In recent years, much experience on conducting studies on the economic contribution of CIs has been gained but, as mentioned above, the use of different methodologies by different groups of researchers has made it impossible to compare the results obtained in various countries.

⁷ Krisztina Penyigey, Peter Munkácsi, The Economic Contribution of Copyright-Based Industries in Hungary http://www.wipo.int/ip-development/en/creative_industry/pdf/hu.pdf

⁸ Stephen E. Siwek, The Economic Contribution of Copyright-Based Industries in USA, The 2006 Report, http://www.iipa.com/pdf/2006_siwek_full.pdf

⁹ Robert G. Picard, Timo E. Toivonen, Mikko Grönlund, The Contribution of Copyright and Related Rights to the European Economy Based on Data from the Year 2000, Final Report, 20 October 2003 http://ec.europa.eu/internal_market/publications/docs/report-copyright-contribution_en.pdf

¹⁰ The Economic Contribution of Copyright-Based Industries in Singapore: An Update www.ipacademy.edu.sg/site/ipa_cws/resource/executive%20summaries/Exec_Sum_Economic_Upd.pdf

¹¹ Krisztina Penyigey, Peter Munkácsi, The Economic Contribution of Copyright-Based Industries in Hungary, http://www.wipo.int/ip-development/en/creative_industry/pdf/hu.pdf

¹² Stephen E. Siwek, The Economic Contribution of Copyright-Based Industries in USA, The 2006 Report, http://www.iipa.com/pdf/2006_siwek_full.pdf

¹³ *Guide on Surveying the Economic Contribution of the Copyright-Based Industries*, WIPO, http://www.wipo.int/copyright/en/publications/pdf/copyright_pub_893.pdf

With the aim of developing a single methodology for conducting such research, an expert working group was established, which included a number of well-known experts in the field of economy and copyright law. The results of the work of this group were published as the *WIPO Guide on Surveying the Economic Contribution of the Copyright-Based Industries*.

The Guide contains generalized methodology, approved by WIPO, and makes recommendations based on the experience of previous studies. This methodological textbook will be very useful for future research.

The present study on the economic contribution of the CIs in Ukraine was conducted in accordance with the WIPO methodology.

1.3. Tasks, Objectives and General Information

In 2006, the State Department of Intellectual Property initiated a study on the economic contribution of the CIs in Ukraine, using the methodology set out in the WIPO Guide.

During a joint meeting between WIPO and the State Department of Intellectual Property in September 2006, WIPO supported the latter's initiative and signed a contract with the State Department, approving the schedule for conducting scientific research on the contribution of the CIs to the Ukrainian economy.

The main objectives of the study included:

- a brief description of the copyright and related rights system in Ukraine;
- a definition of the economic contribution of the copyright-based industries in 2005 in the context of gross income, value added and the number of employees;
- a definition of the share of copyright-based goods and materials as well as copyright-based services in foreign trade;
- comparing the contribution to the economy of the CIs with other sectors;
- comparing the results of the study with the outcome of research carried out in other countries;
- a review of the basic development trends of some core copyright-based industries;
- an evaluation of the main problems and the specific needs of the CIs in Ukraine;
- raising awareness about the importance of the contribution of the CIs in Ukraine.

While conducting this research we took into account the experience gained in Hungary—the first country in Central-Eastern Europe that used the WIPO methodology for this type of research. The Ukrainian research also includes a section with a detailed analysis of certain CIs, as well as relevant statistical data, structural characteristics and development trends. This additional section of the study lies outside the list of obligatory chapters defined by the WIPO methodology but gives a general picture of certain industries in Ukraine over a given time period.

WIPO consulted Mr. Stephen E. Siwek, an expert on the methodology, who has carried out many similar studies on the economic contribution of the CIs in the US and has provided consultative assistance in other countries. His wide experience was of great value to us.

On May 7 and 8, 2007, we held working consultations at the State Department of Intellectual Property with Mr. Stephen Siwek and Dr. Dimiter Gantchev, Director, Creative Industries Division of WIPO. The main objective of this meeting was the adaptation of the WIPO methodology to the Ukrainian system of statistics gathering.

The project was carried out by experts of the State Department of Intellectual Property in close cooperation with representatives of the State Committee of Ukraine on Statistics, the State Tax Administration of Ukraine, the Ministry of Culture and Tourism of Ukraine and the National Bank of Ukraine.

1.4. Development of Ukrainian Legislation in the Field of Copyright

Ukrainian legislation in this field is relatively new and it is developing at the same time as the formation of a constitutional state. The legislation in this field is a component of Ukrainian civil legislation.

The foundation for the legislation was laid down in Russia at the beginning of the 19th century. The Censorial Statute dated April 22, 1828 provided the exclusive right for an author to print his/her works. The law of January 8, 1830 provided a right to the author that the work created by him/her be recognized as a right of property that may be sold. The work was considered an “acquired property” and its author (or translator) was able to publish and sell the work for the term of his/her life. These rights were then handed down to his/her successors for a term of 25 years. In 1857 this term was extended to 50 years. During the regular re-editions of the 10th volume of the Code of Laws of the Russian Empire, the legislative provisions on copyright appeared in this volume for the first time. On March 20, 1911, the Law on Copyright was adopted, which included detailed provisions regulating relations in the field of copyright.

The October Revolution in 1917 closed private publishing houses and the State publishing system enjoyed a monopoly. The works of the authors of a socialist and proletarian tendency were supported; they received significant remuneration and their works were published in large quantities.

Several legislative acts regulating relations in the field of copyright were adopted in the first years of the Soviet regime and only on January 30, 1925 was the first legislative copyright act of the new state adopted, namely the Decree of the Central Executive Committee and the Council of the People’s Commissars of the Union of Soviet Socialist Republics on the Fundamentals of Copyright. In May 1928 the Fundamentals of Copyright was adopted, which included fixed rates of remuneration for authors. After that, the Soviet Republics began to adopt their own laws on copyright.

In Ukraine at that time, the legislative acts covering various issues in the sphere of copyright had been adopted, in particular the Decree of the Council of the People’s Commissars of the Ukrainian Soviet Socialist Republic on an Author’s Honorarium for the Public Performance of Dramatic and Musical Works, dated December 8, 1925.

Later, many of the provisions of the Fundamentals of Copyright were written into Ukrainian legislation. The ownership of copyright after the death of the author was reduced to 25 years.

In 1929 in Ukraine, the respective Law on Copyright was adopted and was in force until 1961, when the Fundamentals of Civil Legislation of the Union of Soviet Socialist Republics were adopted, the fourth chapter of which related to copyright issues. In accordance with these “Fundamentals” every Soviet Republic, including Ukraine, adopted its own civil code, the fourth chapter of which concerned copyright.

Authors’ rights in the USSR were essentially reduced and did not correspond to international standards. That is why the Soviet Union could not join international conventions, including the *Berne Convention for the Protection of Literary and Artistic Works* (Berne Convention). Adhesion to the Universal Copyright Convention, which is more flexible, was only ratified in 1973.

Later, the leadership of the USSR repeatedly announced its intention to sign the Berne Convention and the Paris Convention. This was based on the desire of the majority of scientists—experts in the field of copyright—to bring Soviet legislation on copyright into conformity with the standards in other European countries. First of all, it was necessary to bring Soviet legislation into compliance with the main international copyright conventions. The Fundamentals of Civil Legislation of the Union of Soviet Socialist Republics that were adopted by the *Verkhovniy Soviet* of the USSR in May 1991 included the chapter on copyright. It was planned that the Soviet Republics would use the main provisions of the Fundamentals in developing their own civil legislation.

After proclaiming its independence, Ukraine began to develop a modern copyright system based on the principles of international instruments and the highest standards of copyright enforcement. In December 1993 the *Verkhovna Rada* of Ukraine adopted the Law of Ukraine on Copyright and Related Rights, which was greatly appreciated by European experts and WIPO. This Law was the first legislative act regulating relations in the sphere of related rights in Ukraine.

In furtherance of the Law of Ukraine on Copyright and Related Rights, several normative acts were adopted, which regulated separate issues for the enforcement of copyright and related rights. In November 1994 the Cabinet of Ministers of Ukraine adopted the Decree on Minimal Rates of Authors' Remuneration for the Use of Literary and Artistic Works; in July 1995 the Decree on the State Registration of Author's Rights to Scientific, Literary and Artistic Works was adopted.

With the adoption of this Law and other pieces of legislation, Ukraine established a legal basis in the field of copyright that generally corresponded to international standards. At the same time, Ukraine demonstrated its intention and readiness to integrate into the international system of copyright and related rights. In 1993, as a successor to the USSR, Ukraine confirmed its participation in the Universal Copyright Convention, agreeing to provide protection in Ukraine for the works of foreign authors created since 1973—the date of Ukraine's accession to this Convention. In May 1995 the *Verkhovna Rada* of Ukraine adopted the Law of Ukraine on the Accession to the *Berne Convention for the Protection of Literary and Artistic Works*, and in October 1995, Ukraine became a party to this Convention.

Finally, the main legislative norms on the right to creative work and to the enjoyment of the results of this work; on intellectual property protection; on the protection of an author's moral and economic rights, became part of the Ukrainian Constitution in June 1996.

The following modification to Ukrainian legislation in the field of copyright and related rights was aimed at harmonizing the national legislative base with international law. In 1999, Ukraine became a party to the *Convention for the Protection of Producers of Phonograms against Unauthorized Duplication of Their Phonograms*. In 2001 Ukraine adopted the following laws: the Accession of Ukraine to the *Rome Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations* (the Rome Convention); the Accession of Ukraine to the *WIPO Copyright Treaty (WCT)* and the Accession of Ukraine to the *WIPO Performances and Phonograms Treaty (WPPT)*.

The accession of Ukraine to international copyright treaties promoted the development of an effective copyright and related rights protection system and an increase in its authority throughout the world.

The final step to harmonization of the national legislation of Ukraine was the adoption of a new version of the Law of Ukraine on Copyright and Related Rights in 2001. In 2003, amendments for harmonization of the above-mentioned law with World Trade Organization (WTO) standards were adopted.

Nowadays, Ukraine has a legal system for copyright protection corresponding to the rest of the world, providing full development opportunities to the CIs. From May 16, 2008 Ukraine will be a WTO member and this will only enhance these standards of legal protection.

1.5. Implementation of a State Policy for Copyright and Related Rights

After the reorganization of the central executive bodies in Ukraine in 2000, the President by Decree designated the Ministry of Education and Science as the central body responsible for the realization of State policy in the field of intellectual property. Thus, the State Department of Intellectual Property was created under its auspices.

The tasks of the State Department of Intellectual Property are as follows:

- development of proposals on amendments to the legislation for copyright and related rights;
- ensuring the observance of legislation;
- monitoring the observance of national legislation and international treaties for copyright and related rights;
- ensuring the functioning of collective management societies;
- carrying out activities on curbing infringement of intellectual property;
- overseeing the actions of the State inspectors on IP issues;
- organizing interaction and cooperation between State law enforcement and judicial bodies in curbing infringement of intellectual property.

In June 2000, the State Agency of Copyright and Related Rights under the Cabinet of Ministers of Ukraine was reorganized as the State Enterprise Ukrainian Agency of Copyright and Related Rights. This is the successor to the State Agency of Copyright and Related Rights under the Cabinet of Ministers of Ukraine and operates under the State Department of Intellectual Property, the Ministry of Education and Science of Ukraine. Its main task is the collective management of the economic rights of copyright holders.

After the creation of the State Department of Intellectual Property, a new chapter of legislative activity for copyright and related rights began.

From 2000 to 2007 three laws were adopted, introducing changes and additions to copyright and related rights legislation.

The main piece of legislation in this sphere is the Law of Ukraine on Copyright and Related Rights, adopted in 1993 and amended in 2001 and 2003.

Ukrainian legislation on copyright and related rights complies with the standards of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement), the signing of which is the main requirement for joining the WTO. In 2003 the Law of Ukraine on the Amendments to Several Legislative Acts of Ukraine Related to Legal Protection of Intellectual Property came into force. By its adoption, legislation in the sphere of intellectual property, in particular copyright and related rights, was brought into compliance with the TRIPS Agreement. This Law introduced the provisions to the Ukrainian Civil and Economic Codes, providing for the court to apply preventive measures through its decision even before a relevant claim was entered. The Ukrainian Criminal Code was also amended and extra sanctions against infringers were introduced. Moreover, this Law clarified the issues on the creation and use of copyright and

related rights as well as on monitoring the observance of national legislation and international treaties. It provides for the enforcement of copyright and related rights law according to civil, administrative and criminal legislation as well as the measures for securing the claims.

In order to protect the interests of copyright and related rights owners as well as upholding consumer rights, the Law of Ukraine on Distribution of Copies of Audiovisual Works and Phonograms was adopted in March 2000. This Law established a system of marking audiovisual works and phonograms to protect the rights of owners, the distributors of audiovisual works and phonograms as well as consumers.

Under this Law the State Department of Intellectual Property grants control stamps (holographic stickers) to mark legal audiovisual works and phonograms.

In 2003 this Law was amended with the aim of increasing state control over the circulation of copyright and related rights materials. These changes led to the stamping of laser-readable discs containing computer programs, databases and videos.

The control stamp confirming the legality of a product was also changed. Each control stamp contains information identifying it with the relevant audiovisual work, phonogram, video, computer program or database. These control stamps cannot be used for marking pirated discs. This is therefore an important step in the fight against piracy.

In pursuance of the Ukrainian-American Joint Actions Program on Fighting Against Piracy in the Sphere of Optical Information Carriers, signed by the Presidents of Ukraine and the US in June 2000, which aimed to prevent illegal production, export or import of laser-readable discs and to enforce copyright and related rights in Ukraine, the State Department of Intellectual Property developed the Draft Law of Ukraine on Peculiarities of the State Regulation of Management Subjects Activities Related to Production, Export and Import of Discs for Laser-Reading Systems. This Law was adopted by the Verkhovna Rada of Ukraine in January 2002.

The Law provided for:

- licensing of production, export and import of discs and moulds, which can only be manufactured with the use of licensed equipment and on licensed premises;
- strengthening of copyright and related rights protection, in particular the verification of rights to copyrighted articles. Discs containing such articles may be manufactured only with the consent of the rights owners. The customer and the producer of these discs are jointly liable for their legality;
- a need for special identification codes on all discs. The producer is identified by the application of a special identifying code on the discs. The manufacturer who holds the license for their production is obliged to stamp special codes on them with equipment licensed for this purpose;
- carrying out inspections of production plants by law-enforcement bodies on behalf of copyright and related rights owners or their representatives;
- strengthening of criminal responsibility;
- seizure of discs, equipment and raw materials for their production in cases of violation;
- applying special measures to the production of discs for laser-reading systems, in particular:
 - restriction and temporary prohibition of activities, provided that such activities are illegal;
 - revocation of licenses for production, export and import of discs in case of repeated violations of license conditions. In this case a new license will only be granted three years from the date

- of a decision to revoke by the licensing body;
- theft and/or seizure of discs produced, exported or imported which violate the requirements of the Law.

Ukrainian legislation in copyright and related rights consists of three special laws and nine general laws protecting rights holders. The country is party to six international treaties and conventions as well as to two bilateral agreements (with Azerbaijan and Bulgaria). More than 30 subordinate legislative acts regulate copyright and related rights.

Ukrainian legislation protects the moral and economic rights of authors, performers, producers of phonograms and videos and broadcasting organizations according to international norms and standards.

1.6. Bringing Ukrainian Legislation into Compliance with European Union Legislation

At the moment, in pursuance of the Law of Ukraine on the National Program of Adaptation of the legislation of Ukraine to the legislation of the EU and in consideration of the provisions of the Civil Code, the State Department of Intellectual Property is developing a draft law on Amendments to Several Legislative Acts on Copyright and Related Rights Issues, in order to bring the national legislation for copyright and related rights in line with the EU.

The draft law regulates the creation and use of copyright and related rights and harmonizes the distinctions between several different laws.

It also offers a new approach to the regulation of issues on resale rights, introduces relevant terms of protection for certain types of copyright and related rights (photographic works, phonograms), establishes mandatory collective management for rights in certain fields (re-transmission by cable, reprography, collection of remuneration for blank carriers and recording equipment).

The adoption of the draft law will bring the existing legislation into line with EU legislation, harmonize national laws that promote the improvement of relations in copyright and related rights and strengthen protection of the rights of authors, artists, directors and other creators.

1.7. Collective Management Societies

The Law of Ukraine on Copyright and Related Rights currently in force sets out the main provisions necessary for the creation and operation of a collective management system in Ukraine.

The establishment and development of such a system and State support for collective management societies is one of the most important tasks at present.

Twelve collective management societies are now registered by the State Department of Intellectual Property:¹⁴

1. The State-run Ukrainian Agency for Copyright and Related Rights.
Main scope of activity: management on a collective basis of economic rights of copyright and related rights (mainly manages economic rights relating to copyright).

¹⁴ <http://www.sdip.gov.ua/eng/help/collectupr/collorg/>

2. All-Ukrainian Society of Subjects of Copyright and Related Rights—Oberih.

Main scope of activity: collective management of economic rights relating to copyright, performers, phonogram and video manufacturers.

3. The Association of the Owners of Rights in the Sphere of Fine Arts and Architectural Activity, which is a social organization.

Main scope of activity: collective management of economic rights relating to copyright in fine arts and architectural activities.

4. The Ukrainian Music Alliance, which is an association of enterprises.

Main scope of activity: collective management of economic rights relating to copyright and related rights (mainly deals with the economic rights of performers, phonogram and video manufacturers).

An authorized collective management organization collecting and distributing remuneration (royalties) for the use of phonograms and video and performances related to them, published for commercial gain, mainly used in public broadcasting (land lines or through cable).

An authorized collective management organization collecting and distributing fees paid to producers and importers of equipment and media used for reproducing works and performances in private homes, fixed in phonograms or videos.

5. The Ukrainian League of Musical Rights, which is an association of enterprises.

Main scope of activity: collective management of economic rights relating to copyright and related rights (mainly economic rights of performers, phonogram and video manufacturers).

An authorized collective management society handling the collection and distribution of royalties for the use of phonograms and videos and the performances they contain, published for commercial gain (mainly the public performance of phonograms and videos).

6. The Agency for Protection of Performer's Rights, which is a social organization.

Main scope of activity: collective management of economic rights of performers.

7. The All-Ukrainian Social Organization Film Directors' Guild "24/1".

Main scope of activity: collective management of economic rights in the audiovisual sphere.

8. The House of the Authors of Music in Ukraine.

Main scope of activity: collective management of economic rights relating to copyright.

9. The All-Ukrainian Social Organization "Author".

Main scope of activity: collective management of economic rights relating to copyright.

10. The Guild of Videogram and Phonogram Manufacturers.

Main scope of activity: collective management of economic rights of video and phonogram manufacturers.

11. The All-Ukrainian Social Organization "Ukrainian Authors' Union".

Main scope of activity: collective management of economic rights for performers, video and phonogram manufacturers.

12. The All-Ukrainian Agency for Copyright and Related Rights.

Main scope of activity: collective management of economic rights for performers, video and phonogram manufacturers. Authorized collective management organization handling collection and distribution of royalties for the use of phonograms and videos and performances through them, published for commercial gain.

It should be noted that there is one State-based society—the Ukrainian Agency for Copyright and Related Rights.

Considering that, after the disintegration of the Soviet Union, the system of collective management fell into decay, the banding together of Ukrainian creators under the aegis of the state enterprise was the best method at that time. This was proved by the accession of the Ukrainian Agency for Copyright and Related Rights (the largest collective management society in Ukraine) to the International Confederation of Authors and Composers (CISAC).

Today, taking account of international experience, the State Department of Intellectual Property has started the process of bringing the Ukrainian Agency for Copyright and Related Rights from the State into the public sector. The State Department is taking the necessary measures geared to the legal and organizational re-regulation of the activities of the Ukrainian Agency for Copyright and Related Rights.

In 2003, the State Department of Intellectual Property took measures directed at revitalizing the activities of the collective management societies.

The new direction in the operation of these societies led, in 2003, to the introduction of a system of collection and distribution of royalties for the use of phonograms and videos published for commercial gain, as well as the performances fixed in them. The amount of royalties for the use of phonograms and videos published for commercial gain and the procedure for payment are defined by the relevant Decree of the Cabinet of Ministers of Ukraine.

According to Ukrainian legislation, the main task of collective management societies is the collection, distribution and payment of authors' remuneration. Ukrainian legislation permits remuneration to be collected both for the copyright and related rights holders who authorize them to collect such remuneration, and for those who have not given authority to collect their remuneration and manage their rights. Since legislation does not provide for the number of collective management societies, these organizations are able to compete. In certain cases they can also use unfair methods of competition and these issues are of the highest priority when making amendments to Ukrainian legislation.

The collection and distribution of royalties for the use of phonograms and videos, published for commercial gain, as well as the performances fixed in these phonograms and videos, are carried out by two societies authorized by the State Department of Intellectual Property.

Moreover, in 2004, the system of collection and distribution of remuneration for home reproduction of works and performances by means of these phonograms and videos, was introduced according to the Decree of the Cabinet of Ministers of Ukraine 992 on the Amount of Remuneration Paid by the Producers and Importers of Equipment and Carriers, With the Use of Which the Works and Performances, Fixed in the Phonograms and Videograms, May be Reproduced in Home Conditions, dated June 27, 2003. The remuneration mentioned is collected from the producers and importers of the equipment (tape-recorders, equipment for video recording, video cameras, radio receivers, television receivers) as well as other types of

carrier (audio- and video-cassettes, discs for laser-reading systems). The function of collection and distribution of royalties from the producers and importers of equipment and the carriers is carried out by the collective management society authorized for this purpose.

According to Ukrainian legislation, the State Department of Intellectual Property supervises collective management societies by way of analyzing information on the management of the economic rights and on concluding agreements as well as the collection, distribution and payment of royalties.

It should be noted that in addition to supervising the activities of collective management societies the State Department of Intellectual Property acts as mediator in the resolution of any disputes arising between collective management societies and users.

With the aim of consolidating collective management societies, issues of regulation, further improvements to legislation and its adaptation to international norms, the Coordination Council on Copyright and Related Rights issues was created in 2003 under the State Department of Intellectual Property. The Council consists of the representatives of all the collective management societies. Everyone has the right to express his/her opinion and to make suggestions and proposals for problem-solving. The decision of the Coordination Council is arrived at by the votes of the members.

Acting as mediator, the State Department of Intellectual Property holds regular meetings with all sides to any dispute. In cases where it is impossible to resolve a dispute, the State Department of Intellectual Property suggests putting the issue forward at the next session of the Coordination Council, thus ensuring resolution of the dispute before the court.

Aware of the complexity in the formation of the collective management system in Ukraine, the State Department of Intellectual Property pays special attention to problems involving copyright and related rights and takes any necessary measure to develop relevant legislation.

1.8. Fighting Piracy

Since 2000, one of the priorities of the State Department of Intellectual Property has been the fight against piracy.

Since June 2000, the date of the signing of the Ukrainian-American Joint Actions Program on Fighting Against Piracy in the Sphere of Optical Information Carriers, effective measures on the development of a copyright and related rights protection system in Ukraine and on the introduction of mechanisms for its effective operation have been taken.

The basis for such activity was settled by adoption of the decrees of the President of Ukraine on the Measures on Intellectual Property Protection in Ukraine and on Urgent Measures on Strengthening of Intellectual Property Rights Protection in the Process of Production, Export, Import and Distribution of Discs for Laser-Reading Systems.

In pursuance of these Decrees, the implementation of the Ukrainian-American Joint Actions Program was launched in two stages:

Stage I: The establishment of control over the problem (Termination and Prevention of the Production of Counterfeits by Producers of Optical Information Carriers).

Since the end of 2000, inspections of the premises of producers of discs for laser-reading systems have been regularly carried out in order to ensure compliance with copyright and related rights legislation.

Stage II: The Renewal of Lawful Production of Optical Information Carriers. With the aim of preventing illegal production, export and import of discs for laser-reading systems and to enforce copyright and related rights in Ukraine as well as in pursuance of the Ukrainian-American Joint Actions Program, the *Verkhovna Rada* of Ukraine adopted the Law of Ukraine on Peculiarities of the State Regulation of Management Subjects Activity Related to Production, Export, Import of Discs for Laser-Reading Systems in January 2002.

In March 2001, the US designated Ukraine as a Priority Foreign Country under Special 301 provisions.

Adoption of this Law was an important step for Ukraine in the process of being excluded from the Special 301 list.

For the effective implementation of the provisions of this Law, the State Department of Intellectual Property, the International Federation of the Phonographic Industry (IFPI) and the company Koninklijke Philips Electronics N.V. concluded an Agreement on Cooperation in the Sphere of SID Code Allocation. In accordance with this Agreement, the State Department of Intellectual Property receives the SID codes for distribution to the Ukrainian manufacturers of laser-readable discs when licenses are granted.

At present, eight manufacturers have been granted licenses and allocated the corresponding SID codes for the production of laser-readable discs and matrices.

The Laws of Ukraine on Distribution of the Copies of Audiovisual Works, Phonograms, Videograms, Computer Programs and Databases and on Peculiarities of the State Regulation of Management Subjects Activity Related to Production, Export and Import of Discs for Laser-Reading Systems have provided control mechanisms for the production, export, import and distribution of audiovisual products (in particular the discs for laser-reading systems), and defined the functions and responsibility of the state inspectors on IP issues. These inspectors have been working within the State Department of Intellectual Property since the end of 2002 and their activity is regulated by government legislation.

The inspectors are charged with ensuring the observance of legislation in the field of intellectual property, in particular: writing reports of inspections and orders on elimination of any detected deficiencies; drawing up protocols on administrative infringements according to Articles 51-2, 164-9, 164-13 of the Ukrainian Code on Administrative Infringements and transferring them to the courts; seizing counterfeit products; taking measures against the producers of pirated products; cooperating with the law-enforcement bodies in cases of criminal infringement.

The State Department of Intellectual Property has made an impact on the development of the state system of intellectual property rights enforcement, in particular through its specialized divisions on fighting IP infringements which have been created within the Ministry for Internal Affairs of Ukraine, the Security Service of Ukraine and the State Customs Service of Ukraine.

In pursuance of the Program on Preventive Measures Directed to Fighting against Illegal Production, Distribution and Selling of Audio and Video Products and Compact-Discs, in May 2003, the State

Department of Intellectual Property set up the Coordination Council for fighting infringement of intellectual property.

The activities of this Coordination Council were directed at implementing the Program of Coordinated Activities of Law Machinery and Other Supervisory Bodies on Fighting against Illegal Output and Turnover of Audio, Video Materials that was approved by the combined Order of the Ministry of Education and Science of Ukraine, the Ministry of Internal Affairs of Ukraine, the State Security Service of Ukraine, the State Tax Administration of Ukraine, the General Prosecutor's Office of Ukraine, the Ministry of Culture and Arts of Ukraine, the State Committee of Ukraine on Regulatory Policy and Entrepreneurship and the State Custom Service of Ukraine. This Program is coordinated by the State Department of Intellectual Property.

In 2003, in order to implement the Program, working groups were created in every region. In particular such working groups operate under the Council of Ministers of the Autonomous Republic of Crimea, 'Oblast', the state administrations, municipal state administrations and the state administrations of Kyiv and Sevastopol. The working groups include representatives of all state bodies approved by the program and the state inspectorate on IP issues.

The state inspectors regularly hold inspections of enterprises producing laser-readable discs. Posts were created in all enterprises to provide constant control of the observance of the legislation relating to the manufacture of laser-readable discs. The state inspectors have the right to access these plants at any time.

On August 31, 2005, as a result of effective measures adopted by the Ukrainian Government, the US terminated trade sanctions, and in January 2006, it transferred Ukraine from the Priority Foreign Country list to the Priority Watch List and reinstated its benefits under the GSP program, based on Ukraine's improved enforcement efforts. On April 25, 2008 the US embassy informed the State Department of Intellectual Property that the Office of the US Trade Representative had taken this action as a sign of Ukraine's recent progress in IPR enforcement.

Thus, Ukraine adopted legislation ensuring effective measures against piracy and strengthening control over the production and distribution of audio and video production containing copyright and related rights. Although Ukraine has created favorable conditions for IPR enforcement according to international standards, there are still many problems and the State Department of Intellectual Property considers combating piracy as an ongoing task as it continues its work on strengthening IP protection.

1.9. General Aspects of Copyright and Related Rights

The Ukrainian legal system conforms to the continental model. The copyright legislation of Ukraine is thus considered as civil legislation providing for moral and economic rights.

The Law of Ukraine on Copyright and Related Rights provides protection for authors of works, their successors and other persons to whom the authors and their successors may have transferred their economic rights. An author in Ukraine is considered to be a natural person who created a work as the result of his/her creative activity. In cases where a work was created by several authors, they are considered to be co-authors and joint owners of the rights in the work, using it by agreement among themselves. If a work is produced by an employee, the rights belong jointly to the author and the employer unless otherwise provided for in the contract concluded between them.

Copyright protection is granted to scientific, literary and artistic works and although the law describes 16 objects entitled to copyright protection it is not exhaustive. It must be noted that any part of a work used separately and which includes its original name, is considered as a complete work and shall be legally protected.

The law contains a list of objects that are not subject to copyright protection, in particular, news and announcements on current events, folklore, official documents adopted by state bodies, the state symbols of Ukraine, banknotes, etc. Copyright protection is not granted for ideas, methods, conceptions or discoveries even if they are expressed, described, explained and illustrated in a work.

Copyright in a work shall exist and become effective on the day of its creation.

Copyright will remain in effect throughout the author's lifetime and for 70 years after his/her death, except in cases stipulated in the legislation. With respect to works published anonymously or under a pseudonym, the period of validity of copyright will terminate 70 years after publication of the work. If a pseudonym assumed by an author leaves no doubt as to the author's identity, or if the authorship of a work published anonymously or under a pseudonym is disclosed not later than 70 years after its publication, the common period will apply.

Copyright in works created in co-authorship will be effective throughout the co-authors' lifetime and for 70 years after the death of the last co-author.

If an entire work is published in consecutive volumes, parts, issues, series, etc. at different times, the period of validity of copyright shall be established separately with respect to each published portion of the work.

Copyright in works of posthumously rehabilitated authors will remain valid for 70 years after their rehabilitation.

Copyright in a work that was first published within 30 years after the author's death shall remain in effect for 70 years after the date of its publication.

Any person who published a work for the first time after the expiry of the period of validity of copyright shall enjoy protection equal to that of the author's proprietary rights. The period of validity of these rights shall be 25 years from the time when the work was first published.

According to the law, the protection of related rights is granted without any formalities and regardless of destination, content or value, as well as of the method or form of expression. Protected objects are:

- 1) The performances of literary works, drama, music, musico-dramatic works, choreography, folklore and other works;
- 2) Phonograms and videograms;
- 3) Broadcasts;

Primary related rights holders are performers, phonogram manufacturers, video manufacturers or broadcasting organizations. Their heirs (legal successors), as well as any other person who holds proprietary rights to performances, phonograms, videograms and broadcast programs by virtue of an assignment contract, or by law, are also considered right holders.

The period of validity for proprietary rights with respect to a performance shall expire 50 years after January 1 of the year following the year of the first recording of the performance, and in the absence of such a recording, from January 1 of the year following the year of the performance.

The period of validity for proprietary rights with respect to a phonogram or a video shall expire 50 years after January 1 of the year following the year of the publication of the phonogram or video, and in the absence of such publication, within a period of 50 years from the date of its production, from January 1 of the year following such production.

The period of validity for proprietary rights in respect of a broadcast program shall expire 50 years after January 1 of the year following its first transmission.

Chapter 2. Methodology

2.1. Classification of the Industries in Accordance with the WIPO Methodology¹⁵

Studies in different countries on the economic contribution of the CIs have sometimes employed different approaches in drawing up a coherent list of the role of these industries in the economic life of the country. Different approaches have enabled certain industries to be highlighted in various ways, resulting in differing evaluations of their contribution, taking account of the particular conditions prevailing in the country. However, it has hindered the implementation of international comparisons.

In 2003 and to assist in the development of an international copyright system, implementation of international comparative analyses and raising awareness of the important role of the CIs in the economy of its Member States, WIPO published a Guide on surveying the economic contribution of the copyright industries. The Guide summarizes the experience of different countries in studying these industries and sets out the following categories:

- a. Core Copyright Industries
- b. Interdependent Copyright Industries
- c. Partial Copyright Industries
- d. Non-Dedicated Support Industries

The above-mentioned categories are characterized by their differing dependence on copyright and related rights. The methodology presented in the WIPO Guide aims to cover the contribution of all the CIs.

The core copyright industries are defined in the WIPO Guide as “the industries that are wholly engaged in creation, production and manufacturing, performance, broadcast, communication and exhibition, or distribution and sales of works and other protected subject matter.”

These industries are at the core and the starting point of all CIs. Compared with other copyright industries, their leading role is demonstrated by their important contribution to the economy. Streamlined state policy in the sphere of intellectual property must ensure that the core copyright industries receive special attention.

The following core industries correspond to these criteria:

- (a) Press and literature
- (b) Music, theatrical production, opera
- (c) Motion picture and video
- (d) Radio and television
- (e) Photography
- (f) Software and databases
- (g) Visual and graphic arts
- (h) Advertising services
- (i) Collective management societies

¹⁵ *Guide on Surveying the Economic Contribution of the Copyright-Based Industries*, WIPO, http://www.wipo.int/copyright/en/publications/pdf/copyright_pub_893.pdf

The interdependent copyright industries are defined in the WIPO Guide as “the industries that are engaged in production, manufacture and sale of equipment whose function is wholly and primarily to facilitate the creation, production or use of works and other protected subject matter.”

The basic criteria for the industries in this category are their dependence on the other copyright industries and the impossibility of functioning independently of them.

This category includes manufacture, wholesale and retail (sales and rental) of:

- Television receivers, radios, VCRs, CD players, DVD players, cassette players
- Electronic game equipment and other similar equipment
- Computers and equipment
- Musical instruments
- Photographic and cinematographic instruments
- Photocopiers
- Blank recording material
- Paper

The partial copyright industries are “the industries in which a portion of the activities is related to works and other protected subject matter and may involve creation, production and manufacturing, performance, broadcast, communication or exhibition or distribution and sales.”

Partial copyright industries use copyright and related rights mainly with the aim of increasing the cost of manufactured products as well as creating individual identification features for them.

The partial industries include:

- Apparel, textiles and footwear
- Jewelry and coins
- Other crafts
- Furniture
- Household goods, china and glass
- Wall coverings and carpets
- Toys and games
- Architecture, engineering, surveying
- Interior design
- Museums

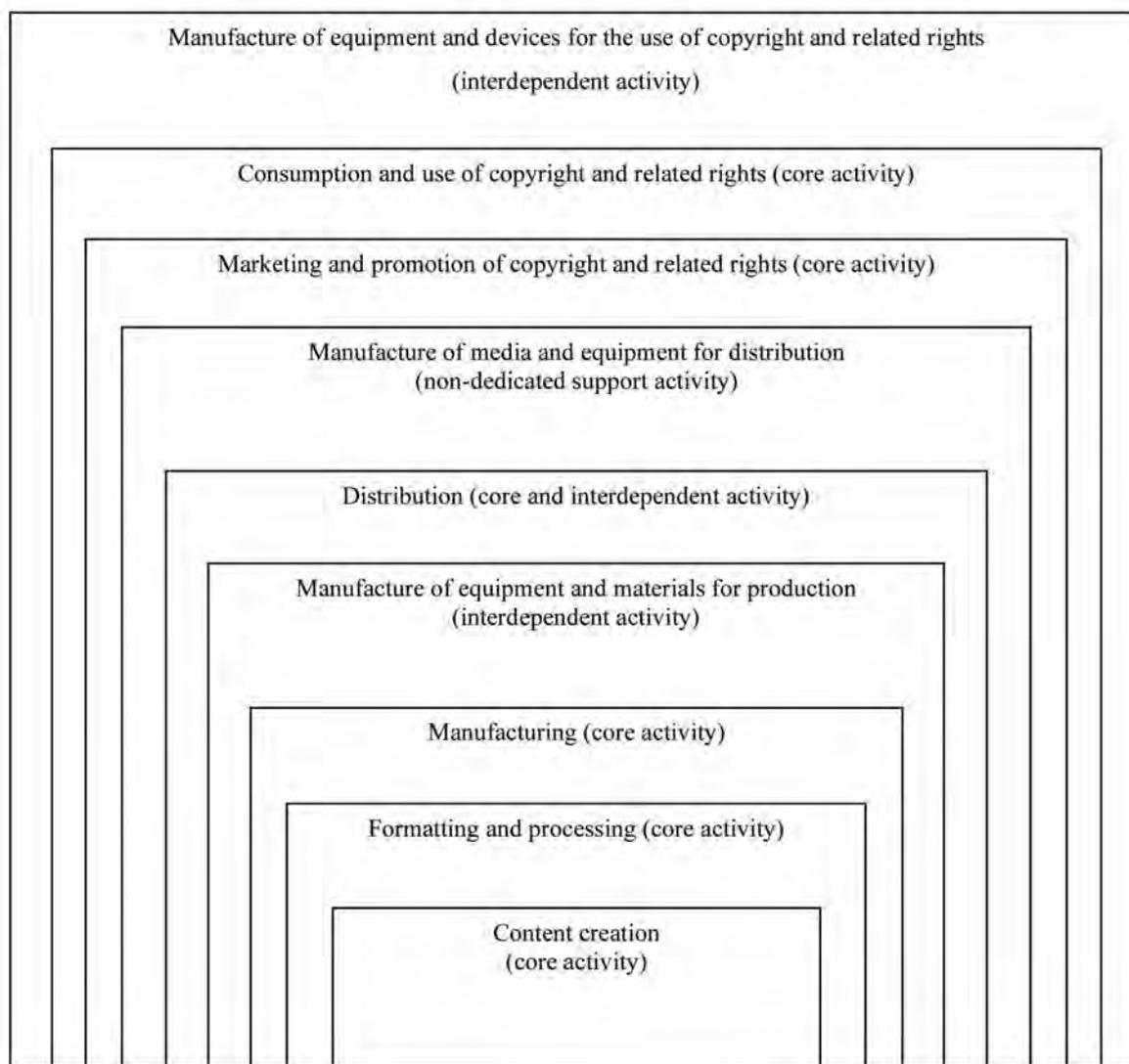
Non-dedicated support industries are “the industries in which a portion of the activities is related to facilitating broadcast, communication, distribution or sales of works and other protected subject matter, and whose activities have not been included in the core copyright industries.”

The non-dedicated industries include business services and delivery modes not directly related to the economic circulation of copyright, but which create conditions for such circulation and render corresponding services with goods and services for other industries.

These industries include:

- General wholesale and retail
- General transportation
- Telephony and the Internet

Economic Activities related to Production, Creation and Distribution of the Copyright and Related Rights Factors



2.2. Identification of Codes and Sources of Information According to the Statistical System in Ukraine

The statistical system in Ukraine, as in many other countries, only provides economic information on legal and physical entities (entrepreneurs) in accordance with basic types of activity, independently defined by them. The system also allows for modification of these types of activity.

Economic Activity Classification

While working on this study, we used the Classification of Economic Activities (KWED) that entered into force on July 1, 1997. On the upper level of aggregation it corresponds with the International Standard Industrial Classification (ISIC), the UN international classification. Since 2006, economic information in Ukraine has been collected in accordance with the Classification of Economic Activities of 2005. The aim of the second KWED edition was to bring it into conformity with the new edition of the General Industrial Classification of Economic Activities (NACE, Rev. 1.1-2002) and review certain ratings at the national level of classification. We believe that the economic indicators, collected under the second KWED, will more precisely reflect the influence of the copyright and related rights industries.

Analyzing the main groups of CIs and corresponding economic activities under the WIPO methodology, we decided that some industries cannot be divided up in the national statistical system because the relevant data are sometimes combined with other economic activities.¹⁶

As in other country studies, we encountered the problem of definition in the national statistical system of the codes, which corresponded with the economic categories related to the WIPO methodology, and also with the problem of forming so-called “transitional keys.” The second major problem was the presence of the “mixed codes.” These codes, as well as the economic activities of the CIs, also include other industries, which are not the subject of the study. It should be mentioned that the WIPO methodology was carefully applied to every code of economic activity at each stage of calculation. Moreover, our team took advantage of the experience of other countries in the application of this methodology.

In conducting the study, we considered the 4-digit format of the information selection as sufficient (for example, code 22.12—newspaper publishing). However, in some cases, the 3-digit format was also considered to be satisfactory (for example, code 74.4—advertising). In relation with the non-dedicated support industries, it was decided to apply section formats (e.g. section 1—transport).

Solving the problem of mixed codes, we decided on a case-by-case basis of application of different methods of selection of the economic indicators of the CIs from these mixed codes, or on a more detailed selection up to the 5-digit format (e.g. code 51.47.2—wholesale of paper products, books, newspapers and other periodicals). In some cases, it was decided to apply a combination of two codes (e.g. code 52.48.1—retail trade of computers and software). During the study, 13 mixed codes were found, and these required further division.

It should also be noted that several macroeconomic indicators used in Ukraine in 2005 differed from the indicators accepted at the international level. We found that the indicator “production” was used in Ukraine instead of “sales of goods and services.” Production included the value of goods and services resulting from production activities in the accounting period.

After consideration of all possible variants, we defined the financial forms of accounting as the most convenient source for the research. There are two types used in Ukraine; a detailed form for large-scale enterprises and a shorter form for small enterprises. On the basis of the financial forms of accounting, we calculated gross production and gross value added separately for each economic activity code, with the use of automated systems.

Information on incomes of self-employed persons was provided by the State Tax Administration of Ukraine. This information was added to the economic results after adjustment. The copyright factor was also used where necessary.

The number of employees in the CIs in Ukraine was calculated through a statistical form of accounting in accordance with the type of economic activity. The State Tax Administration of Ukraine provided information on the number of entrepreneurs and their employees. These groups were added to the relevant employment indicators after adjustment. The copyright factor was also used where necessary.

Considering that in their report the Bulgarians stressed the importance of calculating the contributions of CIs in accordance with the gross value added, we also decided to include this indicator in the Ukrainian report.

¹⁶ Information on discrepancies is presented in the List of Industries in the WIPO *Guide* and the Ukrainian study.

Foreign Trade Statistics

While researching foreign trade, we used the Ukrainian classification for goods related to foreign economic activity and the classification for services under such activities which reflect this. The classification of services in this category corresponds to the classification at a high level of aggregation. That is why most problems arose from “transition keys” for the Ukrainian classification of such goods, which have their own structure and levels of detailed elaboration. In order to provide additional data we used information from the National Bank of Ukraine on bank transfers of license fees and royalty payments.

Alternative Sources of Information

According to the WIPO methodology, not only official statistical sources of information were used while conducting the survey. It was considered appropriate to obtain information through questionnaires sent to the target groups, individual interviews with representatives of the CIs and other reliable sources. Our experience was that sending questionnaires to targeted companies is not effective. Only 10 questionnaires of the 1000 sent out were returned completed. Such a low level of response (around 1 per cent) made additional analysis of the CIs impossible.

Personal interviews were considered much more effective for obtaining information from the industry representatives. We noted that they were very willing to provide us with information. However in many cases, even for them, detailed information was unavailable. A good example of such information is the employment of and remuneration paid to employees.

Market surveys conducted by the industries themselves were the subject of some interest. However, such surveys are not conducted systematically and the methodology is unclear. Therefore, in many cases the compatibility of such studies with the survey conducted according to the WIPO methodology is questionable. In this survey such studies were used in order to allocate mixed codes. For example, it was possible to allocate mixed code 52.48.1—retail of computers and software— using the ratio of 9:1 discovered from a study carried out by Microsoft Ukraine (*The Economic Impact of IT, the Software Industry and Microsoft*, IDC Report, December 2006).

We would also like to mention that among the most appropriate sources of information were various state bodies responsible for the collection of information regarding CIs in the different areas. Such information is contained in a variety of formats and in many cases proved incompatible. However there were opportunities to use such information in the distribution of mixed codes. For example, information from the additional survey of the State Statistical Committee was used for distribution of code 74.4—telecommunications and the allocation of its share of copyright. The shares for the economic activity of cable broadcasting and transmission and receiving television and radio programs and radio communications defined by the above-mentioned study were taken into account.

List of Industries in the WIPO Guide and the Ukrainian Study

Category	Group	
	WIPO	Ukraine
Core Copyright Industries	Press and literature Music, theater, opera Motion picture and video Radio and television Photography Software and databases Visual and graphic arts Advertising Collective management societies	Press and literature Music, theater, opera Motion picture and video Radio and television Photography Software and databases Visual and graphic arts Advertising Collective management societies
Interdependent Copyright Industries	TV sets, radio, videotape recorders, CD players, DVD players Computers and equipment Musical instruments Photographic and cinematographic instruments Photocopiers Blank recording material Paper	TV sets, radio, videotape recorders, CD players, DVD players Computers and equipment (including photocopiers) Musical instruments Photographic and cinematographic instruments Blank recording material Paper
Partial Copyright Industries	Apparel, textiles and footwear Jewelry and coins Other crafts Furniture Household goods, china and glass Wall coverings and carpets Toys and games Architecture, engineering, surveying Interior design Museums	Apparel, textiles and footwear Jewelry and coins Other crafts Furniture Household goods, china and glass Wall coverings and carpets Toys and games Architecture Museums
Non-Dedicated Copyright Industries	General wholesale and retail General transportation Telephony and Internet	General wholesale and retail General transportation Telephony and Internet

2.3. The Copyright Factor

In accordance with the WIPO methodology, four types of CIs may be distinguished; the criteria for the differentiation of these industries being their level of dependence on copyright and related rights. Thus, each research group must define the level of dependence of each specific industry on copyright and related rights in accordance with the legislation and particular situation of each country.

The level of dependence of an industry on copyright and related rights is called “the copyright factor.” The WIPO Guide provides for this factor to be defined “with respect to all industries except the core copyright-based industries where the factor of copyright constitutes 100%” (WIPO *Guide*, page 57).

Thus, the copyright factor is the value from 0 to 1, the use of which makes it possible to define the level of dependence of an industry on copyright. It is also possible to define what share of an industry’s contribution should be considered in the research. The copyright factor will be multiplied by not only the share of GDP but also the share of gross production and the share of employment.

When defining the factor, we carried out different estimations of the dependence of industries on copyright, taking account of previous research in other countries. On the basis of our own expert knowledge and estimates as well as international experience (research in Bulgaria, Hungary and the US) we decided to define the copyright factor for interdependent industries as 1 in view of the close relationship of these industries with the creation, distribution and use of copyright and related rights.

With respect to the partial copyright-based industries, we applied the copyright factor that was developed by means of international comparisons and the analysis of the copyright factors in the countries of the region.

The copyright factor for the non-dedicated copyright-based industries was defined using the approach provided by the US research.¹⁷ According to this approach the copyright factor for non-dedicated industries is equal to the total of the correlation of the contribution of the core, interdependent and partial industries to GDP. The same correlation will also be estimated with respect to the shares of value added, production and employment. In our research this factor amounted to 0,023 when calculating the share of GDP of the non-dedicated industries.

¹⁷ Stephen E. Siwek and Harold W. Furchtgott-Roth, *Copyright Industries in the U.S. Economy*, 1990, Appendix B-6

The Copyright Factor used in the Ukrainian Study.

I. Core Copyright Industries	Copyright Factor
Press and literature	1.000
Music, theater, opera	1.000
Motion picture and video	1.000
Radio and television	1.000
Photography	1.000
Software and databases	1.000
Visual and graphic arts	1.000
Advertising	1.000
Collective management societies	1.000
II. Interdependent Copyright Industries	
TV sets, radio, videotape recorders, CD players, DVD players	1.000
Computers and equipment (including photocopying equipment)	1.000
Musical instruments	1.000
Photographic and cinematographic instruments	1.000
Blank recording material	1.000
Paper	1.000
III. Partial Copyright Industries	
Apparel, textiles and footwear	0.005
Jewelry and coins	0.250
Other crafts	0.400
Furniture	0.050
Household goods, china and glass	0.005
Wall coverings and carpets	0.020
Toys and games	0.500
Architecture	0.100
Museums	0.500
IV. Non-Dedicated Copyright Industries	
Wholesale and retail trade	0.023
Transportation	0.023
Telephony and Internet	0.023

Chapter 3. The Contribution of the Copyright-Based Industries to the Ukrainian Economy

3.1. The Contribution of the Copyright-Based Industries to the Ukrainian Economy in 2005

The CIs are characterized by their contribution of 2.85 per cent to GDP in 2005 or 12,583.54 million UAH. The contribution of the core copyright industries amounted to 1.54 per cent, or 6,815.61 million UAH.

Contribution of the CIs to gross production comprised 3.47 per cent of the aggregate gross production in 2005 or 36,336.71 million UAH. The contribution of the core industries to gross production comprised 2.07 per cent, or 21,714.34 million UAH.

In 2005, 360,412 persons were employed in economic activities related to copyright and related rights in Ukraine, or about 1.91 per cent of the total working population. The total share of employment in the core industries comprised 219,495 persons or 1.16 per cent of the total working population.

Taking the economic indicators into account, it can be concluded that the core industries form the largest economic sector among the total CIs in their share of GDP, gross production and employment.

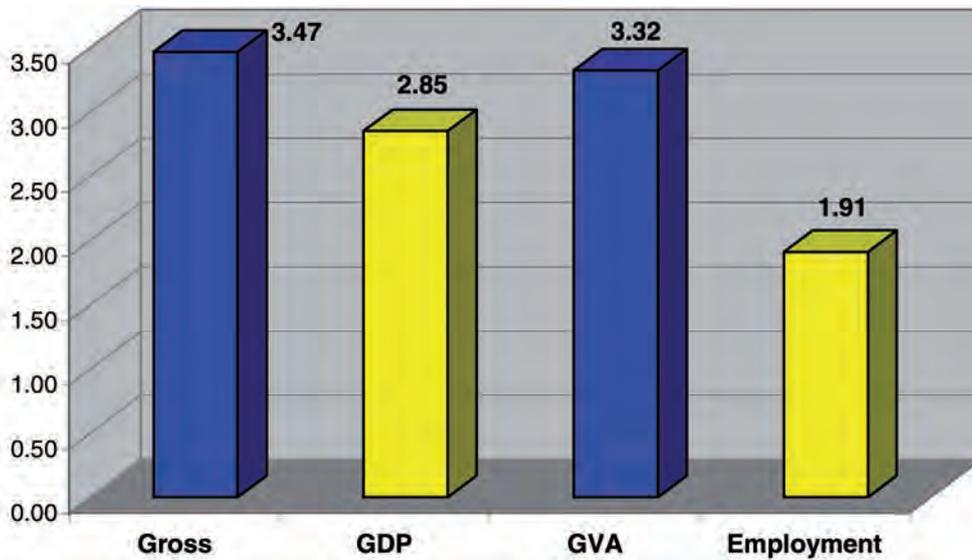
In general, the contribution of the core industries to the CIs comprised 54.2 per cent of GDP: *i.e.*, 60.9 per cent of employment and 59.8 per cent of gross production.

The Contribution of the Copyright-Based Industries to the Ukrainian Economy in 2005

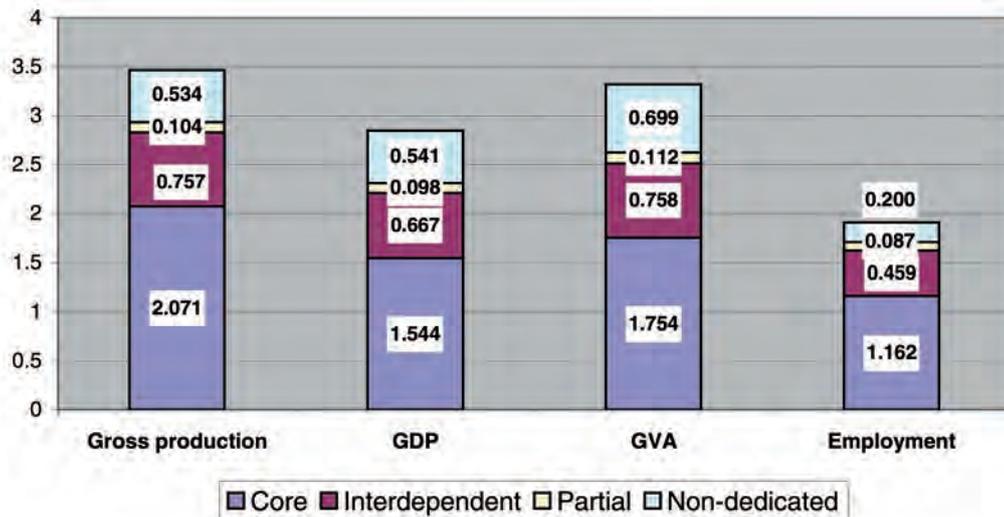
All Copyright-Based Industries	Gross Production		Value Added			Number Employed	
	UAH ('000'000)	%	UAH ('000'000)	% of GDP	% of GVA	Employees ('000)	%
Core copyright industries	21,714,340	2.071	6,815,605	1.544	1.754	219,495	1.162
Interdependent copyright industries	7,932,422	0.757	2,944,039	0.667	0.758	86,695	0.459
Partial copyright industries	1,093,533	0.104	434,412	0.098	0.112	16,480	0.087
Non-dedicated copyright industries	5,596,418	0.534	2,389,479	0.541	0.699	37,741	0.200
Total	36,336,714	3.466	12,583,535	2.850	3.322	360,412	1.908
Economy of Ukraine	1048481	100	441,452	100		18886.5	100

¹⁸ Annual average US\$ rate comprised 5,12 UAH for US\$1 in 2005, in accordance with information provided by the National Bank of Ukraine http://www.bank.gov.ua/Fin_ryn/KURS_MID/kurs_96_last.htm.

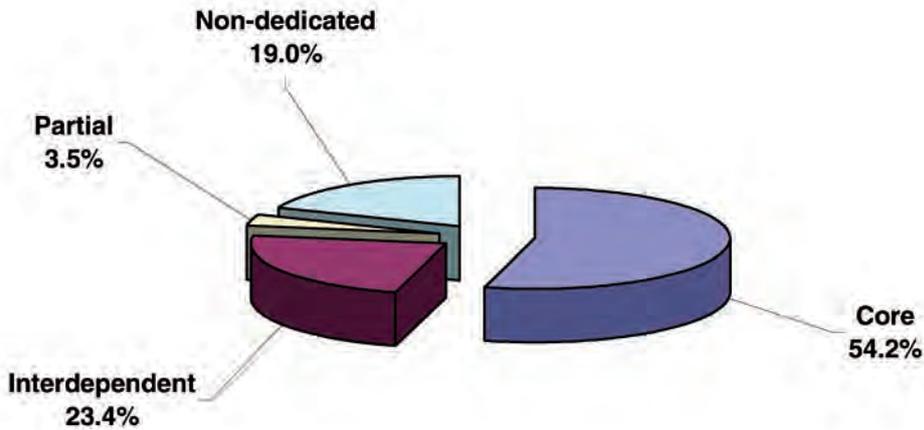
Economic Indicators of the Copyright-Based Industries in 2005 (%)



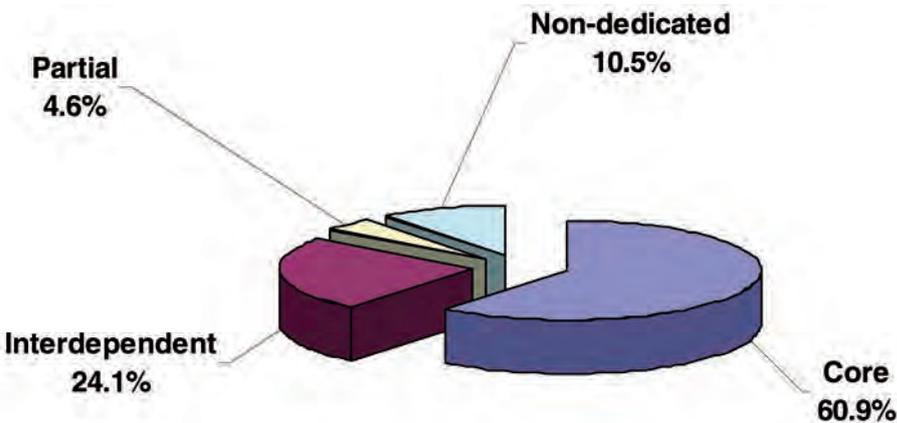
Economic Indicators of the Copyright-Based Industries in 2005 (%)



Share of Copyright and Related Rights-Based Industry Contribution in Terms of GDP in 2005 (%)



Share of Copyright and Related Rights-Based Industry Contributions in Terms of Employment in 2005 (%)

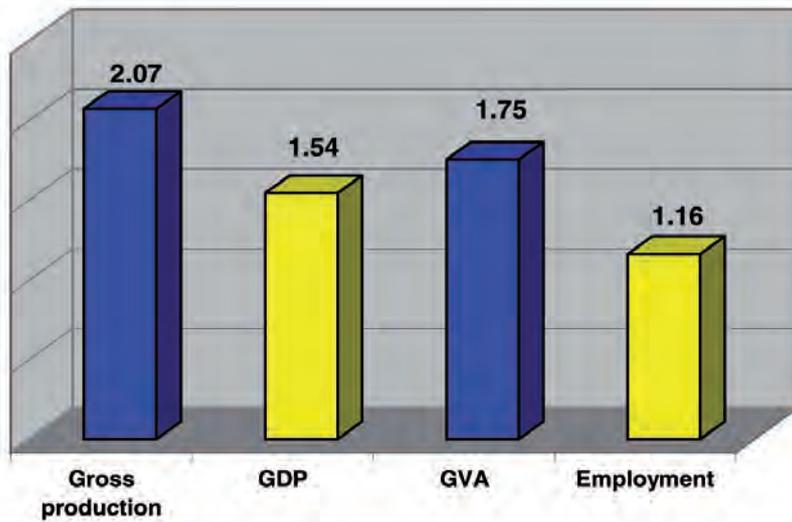


3.2. The Contribution of the Core Copyright Industries to the Ukrainian Economy in 2005

The core copyright-based industries consist mainly of the cultural industries (press, literature, music, opera, visual art, etc.) as well as the industries related to the development of software and databases.

The importance of copyright and related rights in these industries is beyond question, as its main assignment involves creation, manufacture, distribution and use of copyright and related rights.

Economic Indicators of the Core Industries in 2005 (%)



In 2005, the core industries were characterized by their economic contribution of 2.07 per cent of the gross production of Ukraine or 21,714.34 million UAH. The economic contribution of the core industries to GDP comprised 1.54 per cent or 6,815.61 million UAH.

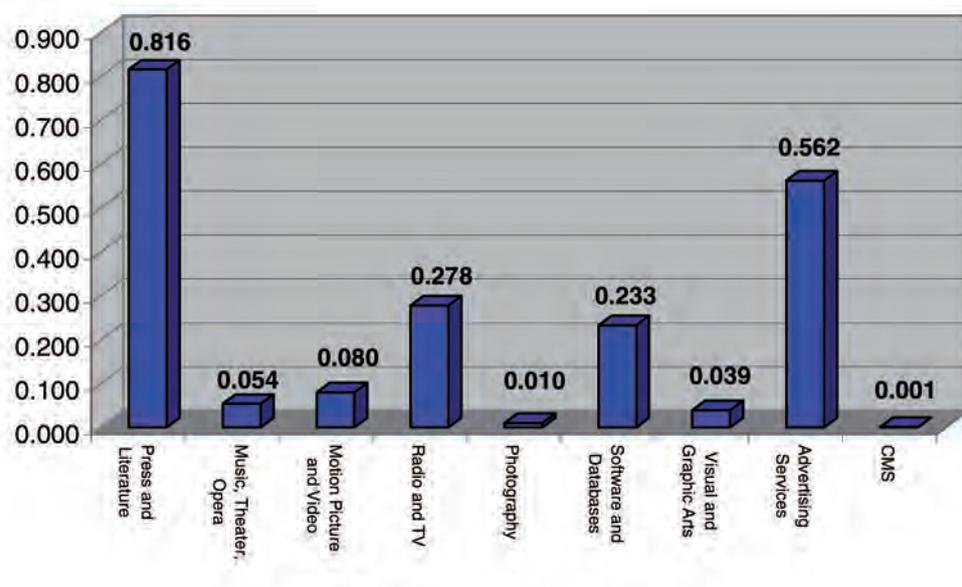
The contribution of the core industries to the total number employed therefore amounted to 219,495 or 1.16 per cent.

The Contribution of the Copyright-Based Industries to the Ukrainian Economy in 2005

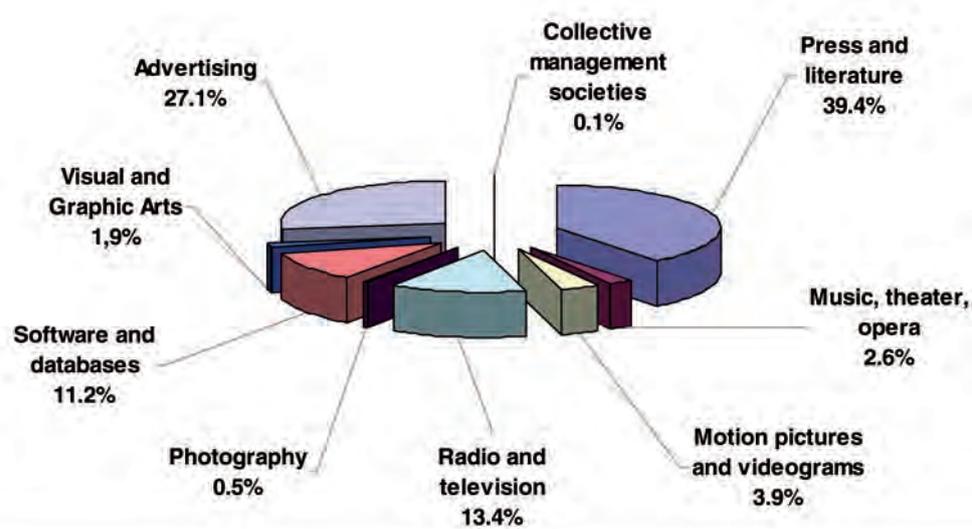
Core Copyright Industries	Gross Production		Value Added			Number Employed	
	UAH ('000'000)	%	UAH ('000'000)	% of GDP	% of GVA	Employees ('000)	%
Press and literature	8,554,574	0.816	2,807,573	0.636	0.722	113,417	0.601
Music, theater, opera	562,535	0.054	301,527	0.068	0.078	14,518	0.077
Motion pictures and videograms	838,881	0.080	416,410	0.094	0.107	13,432	0.071
Radio and television	2,910,884	0.278	973,771	0.221	0.251	19,956	0.106
Photography	105,362	0.010	17,209	0.004	0.004	3,912	0.021
Software and databases	2,439,581	0.233	906,560	0.205	0.233	28,634	0.152
Visual and graphic arts	406,431	0.039	205,129	0.046	0.053	3,405	0.018
Advertising	5,896,091	0.562	1,182,689	0.268	0.304	22,084	0.117
Collective management societies*	13,535	0.001	4,737	0.001	0.001	138	0.001
Total	21,714,340	2.071	6,815,605	1.544	1.754	219,495	1.162
Economy of Ukraine	1048481	100	441,452	100		18886.5	100

* The information on the total volume of fees and the number employed in collective management societies in 2005 was calculated on the basis of official reports made to the State Department of Intellectual Property of Ukraine. Information on the volume of remuneration was based on the assumption that it comprised 35 per cent of the aggregate amount of fees.

Contribution of the Core Industries to Ukrainian GDP in 2005 (%)



Share of the Copyright and Related Rights-Based Industry Contribution in Terms of GDP in 2005 (%)

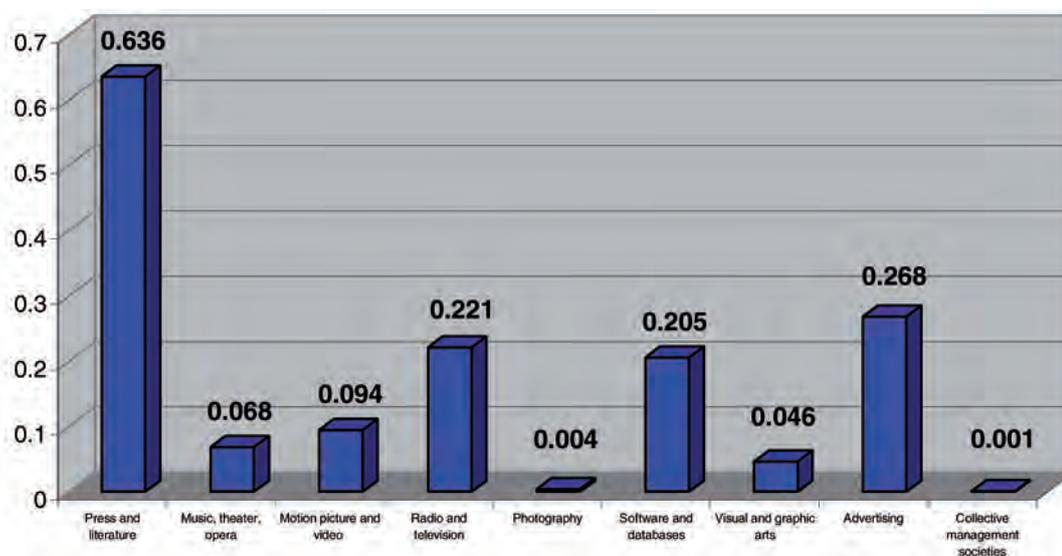


Considering the core industries from the point of view of GDP, the major players were press and literature and advertising, together comprising 66.5 per cent of the aggregate gross production volume of the core industries or 1.38 per cent of gross national production. Adding the radio and television and software and database sectors to the foregoing, the group of four leading industries in this domain comprised 90.1 per cent of the gross production of the core industries or 1.89 per cent of gross national production. In comparison with the total for the CIs, the output of these four industries comprised 54 per cent of the aggregate volume.

Thus, music, opera, theater, motion picture and video, photography and collective management societies comprised 9.1 per cent, or 0.18 per cent of gross national production.



Contribution of the Core Industries to Ukrainian GDP in 2005 (%)



Considering the contribution of the core industries to national GDP, it can be seen that the leading sector was press and literature, whose value added comprised 0.6 per cent of Ukrainian GDP or 2,807.57 million UAH, *i.e.*, 41.2 per cent of the aggregate value added of the core industries.

Therefore, the contribution of the four leading sectors: radio and television, software and databases, press and literature and advertising amounted to 86.2 per cent of the value added of the core industries or 1.3 per cent of Ukrainian GDP.

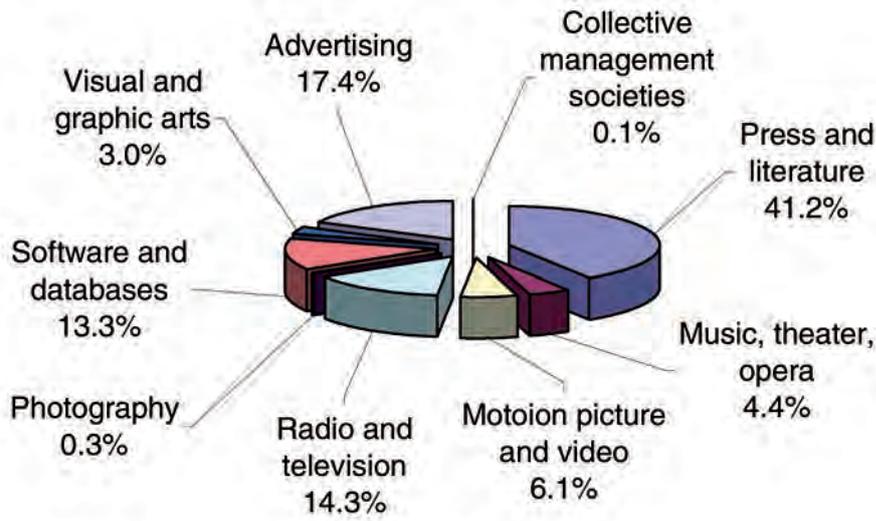
The differences in results in relation to the gross production and contribution to GDP (as mentioned in previous studies)¹⁹ can be explained as follows: different industries have different needs in terms of goods and services. For example, if the advertising sector generated 0.62 per cent of the gross production, this only comprised 0.268 per cent of Ukrainian GDP. At the same time, the software and database sector generated 0.233 per cent of the gross production or 0.205 per cent of national GDP.

We therefore concluded that the share of the value added in the advertising sector may more properly be a part of the radio and television sector.

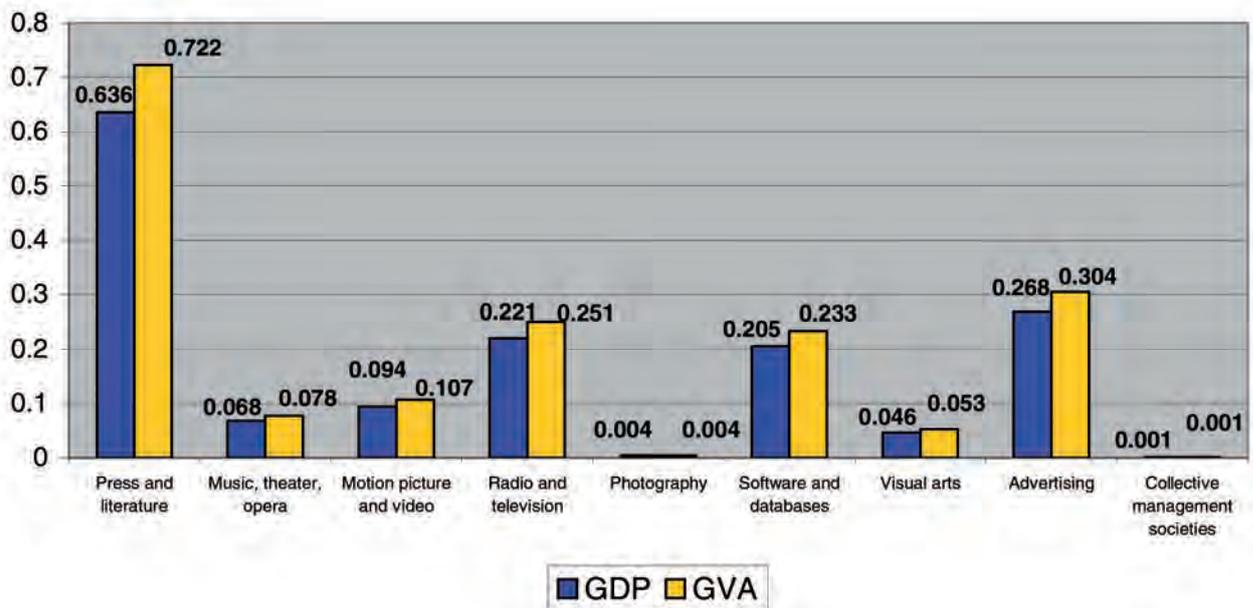
We also found that the software and database sector has been one of the most rapidly developing sectors in the Ukrainian economy in recent years. However, in view of insufficiently detailed studies as well as the difficulties in statistic gathering, the determination of its volume and structure appear impossible in the framework of this study.

¹⁹ *National Studies on Assessing the Economic Contribution of Copyright-Based Industries*, WIPO, 2006, p. 320

Share of the Core Industry Contributions to Ukrainian GDP in 2005 (%)

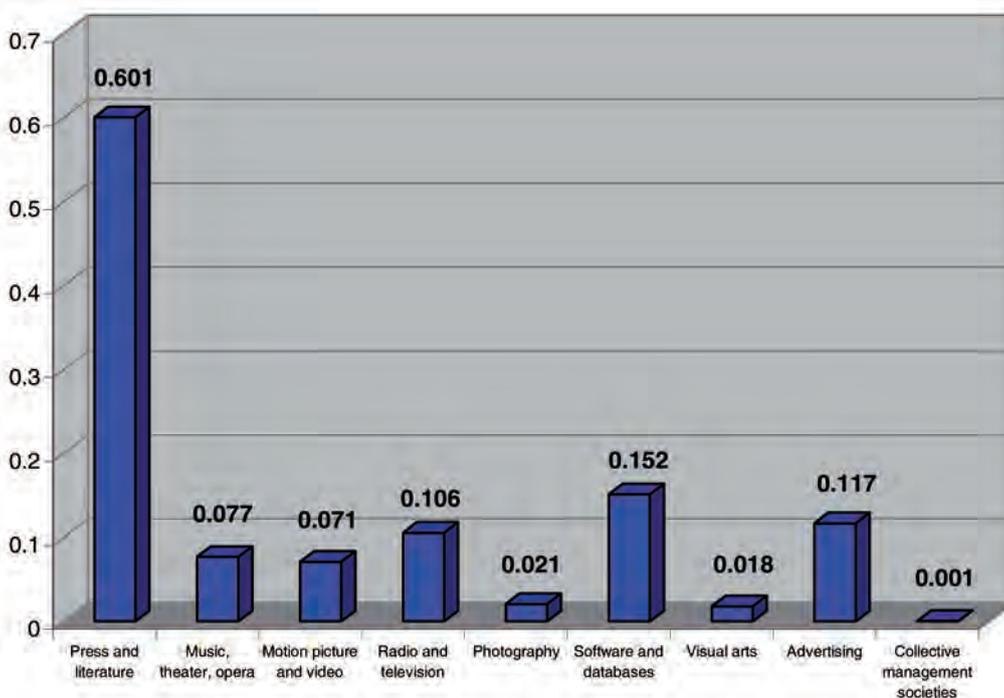


Share of the Core Industries in Relation to Ukrainian GDP and GVA in 2005 (%)

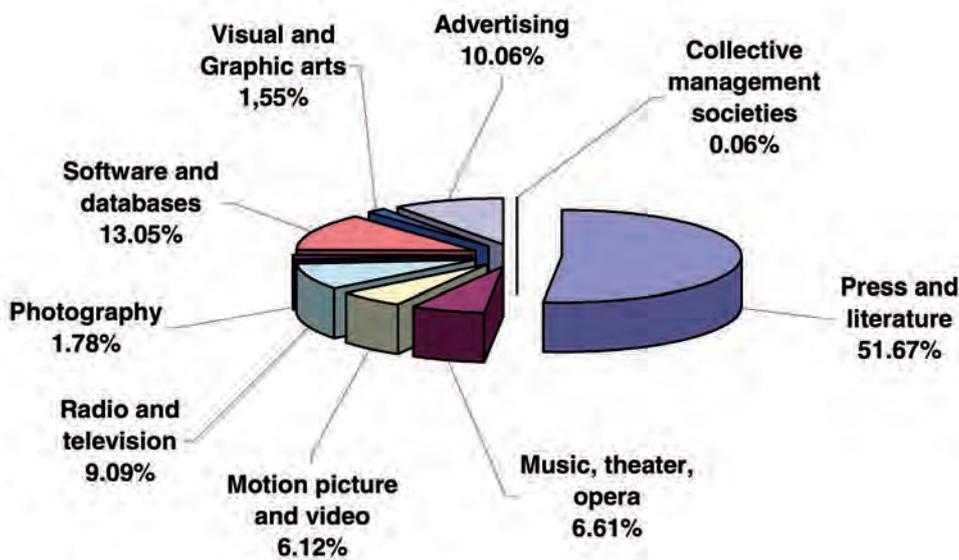


The value added of the core industries in 2005 comprised 1.75 per cent of national GVA.

Contribution of the Core Industries in Relation to Employment in 2005 (%)



Share of the Copyright and Related Rights-Based Industry Contributions in Terms of Employment in 2005 (%)

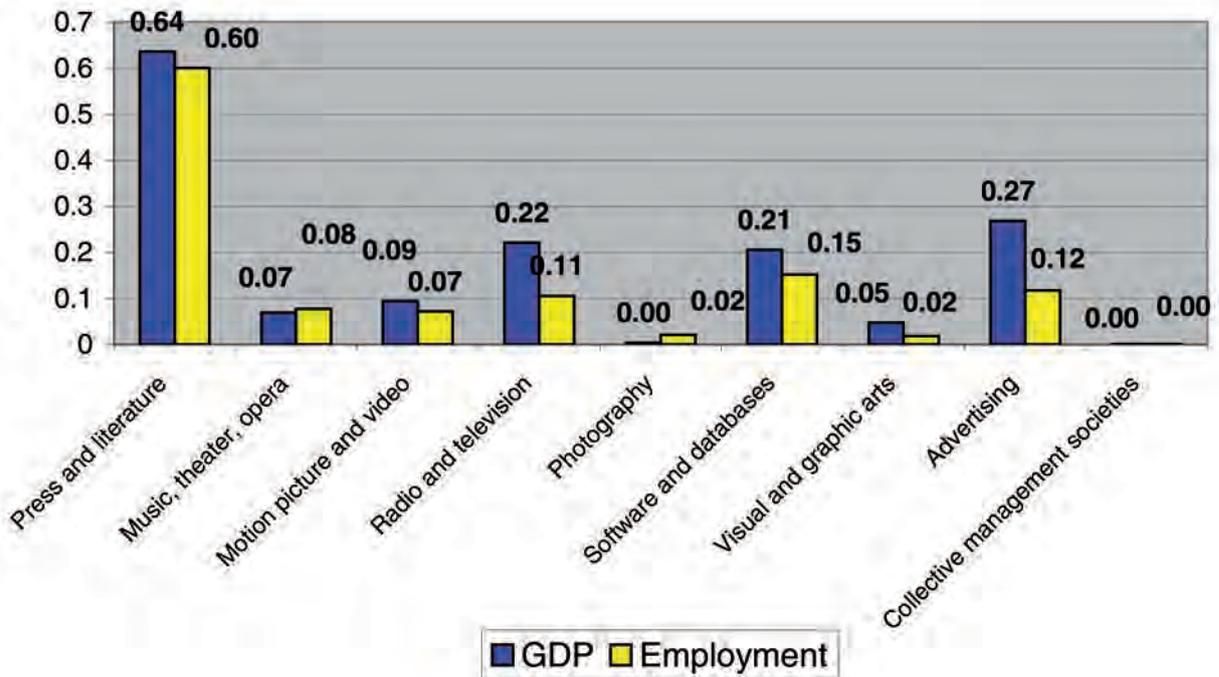


Considering the core industries from the point of view of employment, it was observed that, in terms of GDP, the leading sector was press and literature, employing 51.7 per cent of the workforce employed in the core industries or 0.6 per cent of the working population of Ukraine.

As for the main GDP contributors, the four sectors employing the most workers were radio and television, software and databases, press and literature and advertising, which together accounted for a total of 83.87 per cent of the aggregate volume of the workforce within the core industries, or 0.98 per cent of the total national working population.

The difference between the distribution of GDP and share of employment can be explained by different production organizations and services in various core industries.

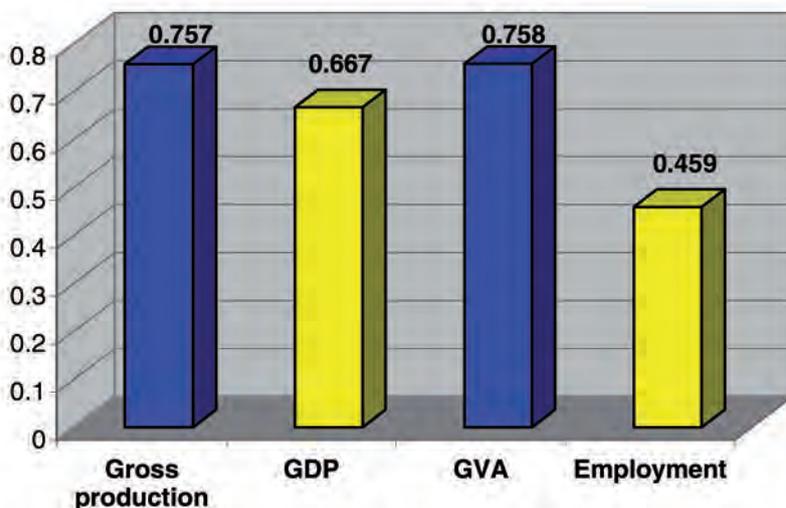
Share of the Core Industries in Terms of GDP and Employment in 2005 (%)



3.3. The Contribution of the Interdependent Copyright Industries to the Ukrainian Economy in 2005

Interdependent copyright-based industries are those concerned with production, sales, rental of equipment and materials used for creation and consumption of copyright and related rights products.

Economic Indicators of the Interdependent Industries in 2005 (%)

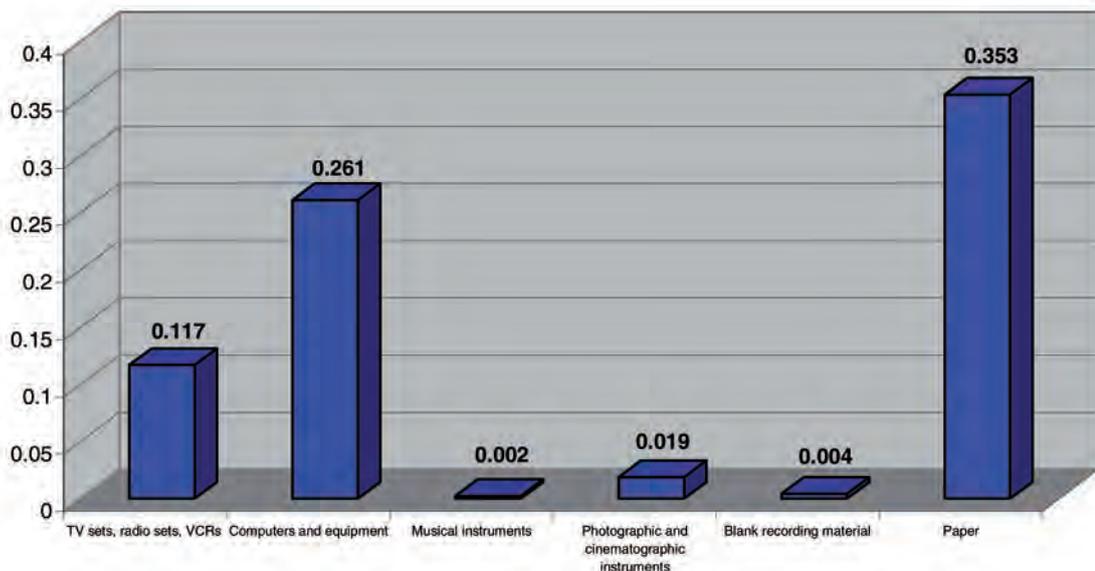


The interdependent copyright industries were characterized by their contribution of 0.76 per cent to gross production in Ukraine in 2005 and comprised 7,932.42 million UAH. The contribution of the interdependent copyright industries to Ukrainian GDP amounted to 0.67 per cent in 2005 or 2,944.04 million UAH.

The Contribution of the Interdependent Copyright-Based Industries to the Ukrainian Economy in 2005

Interdependent Copyright Industries	Gross Production		Value Added			Number Employed	
	UAH ('000'000)	%	UAH ('000'000)	% of GDP	% of GVA	employees ('000)	%
TV sets, radio sets, VCR, CD players, DVD players, etc.	1,226,179	0.117	556,859	0.126	0.143	25,662	0.136
Computers and equipment (including photocopiers)	2,736,224	0.261	1,216,409	0.276	0.313	23,919	0.127
Musical instruments	22,912	0.002	9,188	0.002	0.002	1,254	0.007
Photographic and cinematographic instruments	196,976	0.019	90,676	0.021	0.023	9,384	0.050
Blank recording material	43,839	0.004	15,169	0.003	0.004	0,227	0.001
Paper	3,706,292	0.353	1,055,738	0.239	0.272	26,250	0.139
Total	7,932,422	0.757	2,944,039	0.667	0.758	86,695	0.459
Economy of Ukraine	1048481	100	441452	100		18886,5	100

Share of the Interdependent Industries in Terms of Gross Production in 2005 (%)



The highest contribution to gross production in 2005 among the interdependent industries was made by the sectors for paper (0.35 per cent), computers and equipment (0.26 per cent); TV sets, radio sets, VCRs (0.11 per cent) and accounts for 0.72 per cent of the gross production volumes, approximately 96.7 per cent of the gross production of the interdependent industries.

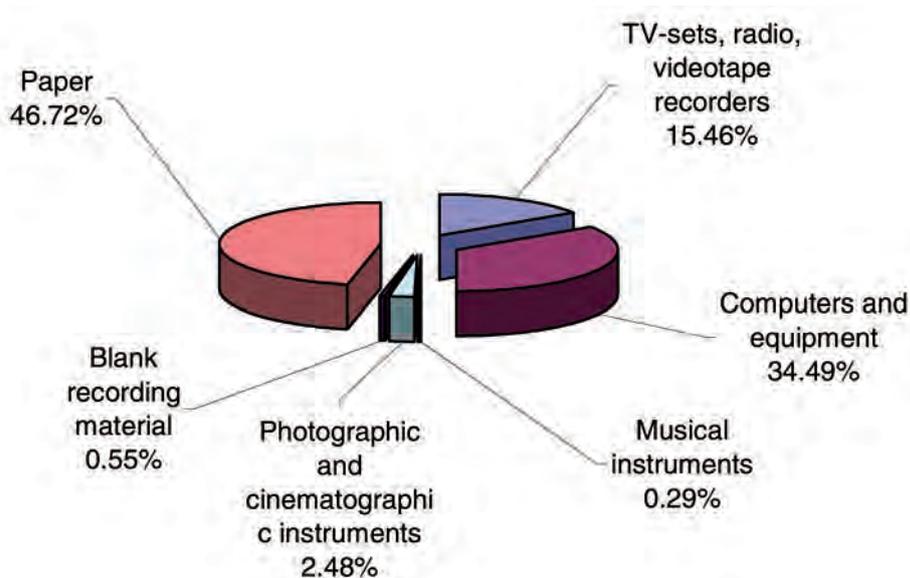
The paper sector was the leader in the interdependent industries for gross production in 2005 and comprised nearly 46.7 per cent of the total contribution of these industries. This sector is heavily dependent on imports of raw materials, which explains its share of 45.4 per cent in total imports for the interdependent industries.

Computers and equipment, TV sets, radio sets and VCRs are based on the wholesale and retail trade of imported goods and are characterized by poor production capacity. Their share of foreign trade amounts to 26.2 per cent of the total import volumes for TV sets, radio sets and VCRs and 17.5 per cent of the import volume for computers and equipment. These goods are partly for home consumption and partly exported. Thus, the sector for TV sets, radio sets and VCRs amounted to 44.9 per cent of interdependent industry exports and computers and equipment, 12.4 per cent.

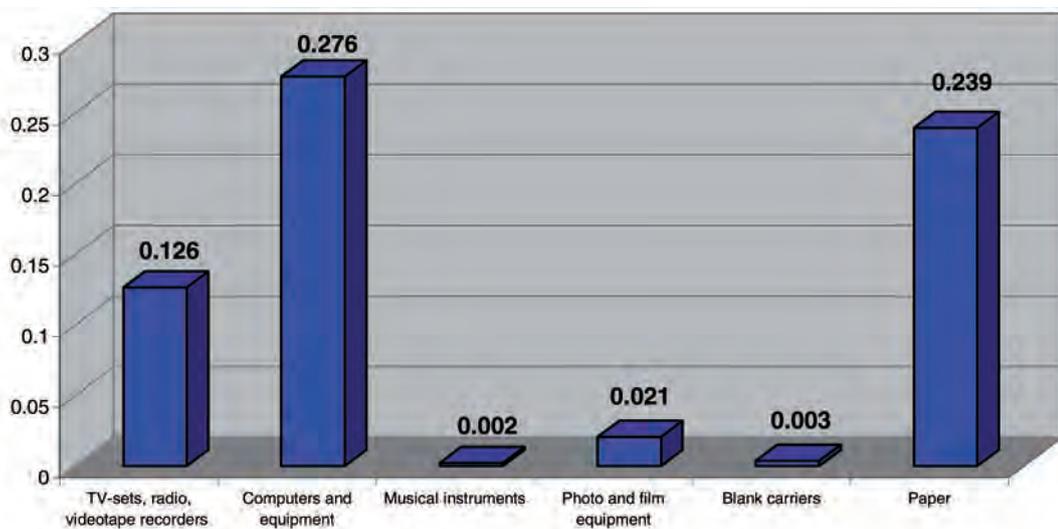
It is, however, difficult to classify the industries based on wholesale and retail trade by means of the production indicator. Among the interdependent industries, the indicator was most successfully applied to the paper sector.

For some estimates, it is also necessary to mention that a substantial part of the wholesale and retail market in the sectors for computers and equipment and TV sets, radio sets and VCRs may slip out of the official statistics, whereas the paper sector (which imposes import duties) was could be analyzed with more precision.

Share of the Contribution of the Interdependent Industries in Terms of Gross Production in 2005



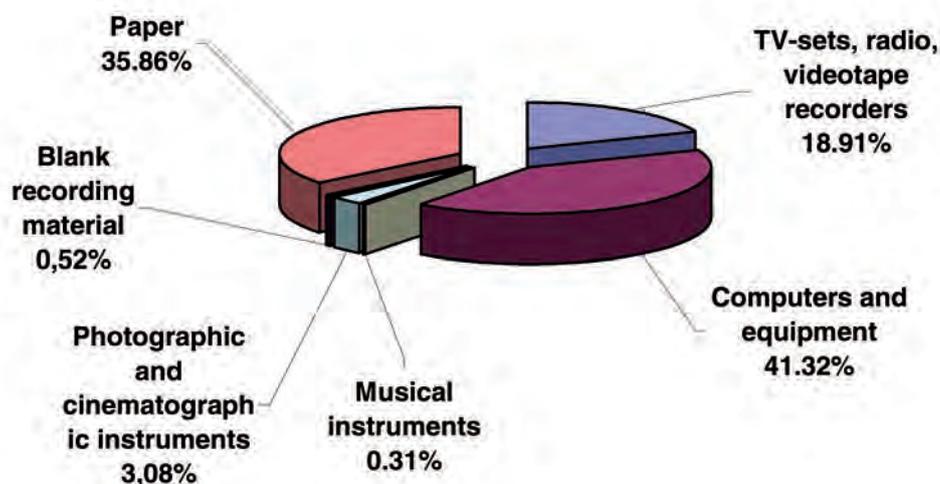
The Contribution of the Interdependent Industries to Ukrainian GDP in 2005 (%)



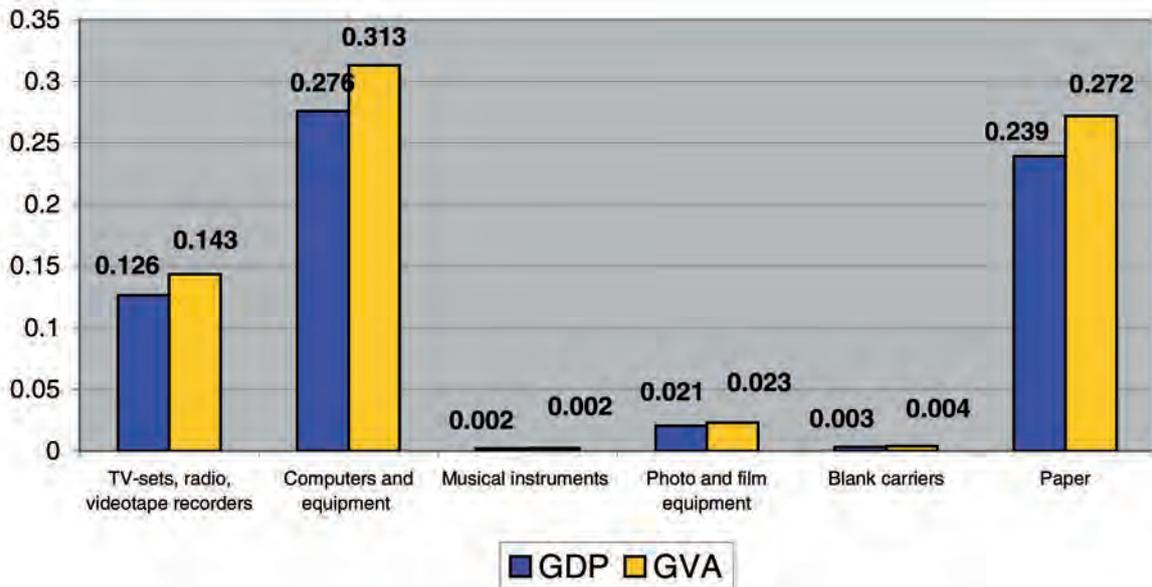
The above table indicates that the sector for computers and equipment makes the largest contribution to the economy—0.28 per cent of GDP, or 1,216.41 million UAH. The paper sector, having the lowest share of value added in the group (28.5 per cent) amounts to 0.24 per cent of GDP or 1,055.74 million UAH. The TV set, radio, videotape recorder sector totaled 0.13 per cent of GDP or 556.86 million UAH.

Two combined sectors relating to high-tech electronics accounted for around 60.23 per cent of the GDP of this group. If the paper sector is added to the sectors for computers and equipment and TV sets, radio and videotape recorders, this group accounted for 96.09 per cent of GDP.

Share of the Contribution of the Interdependent Industries in Terms of GDP in 2005

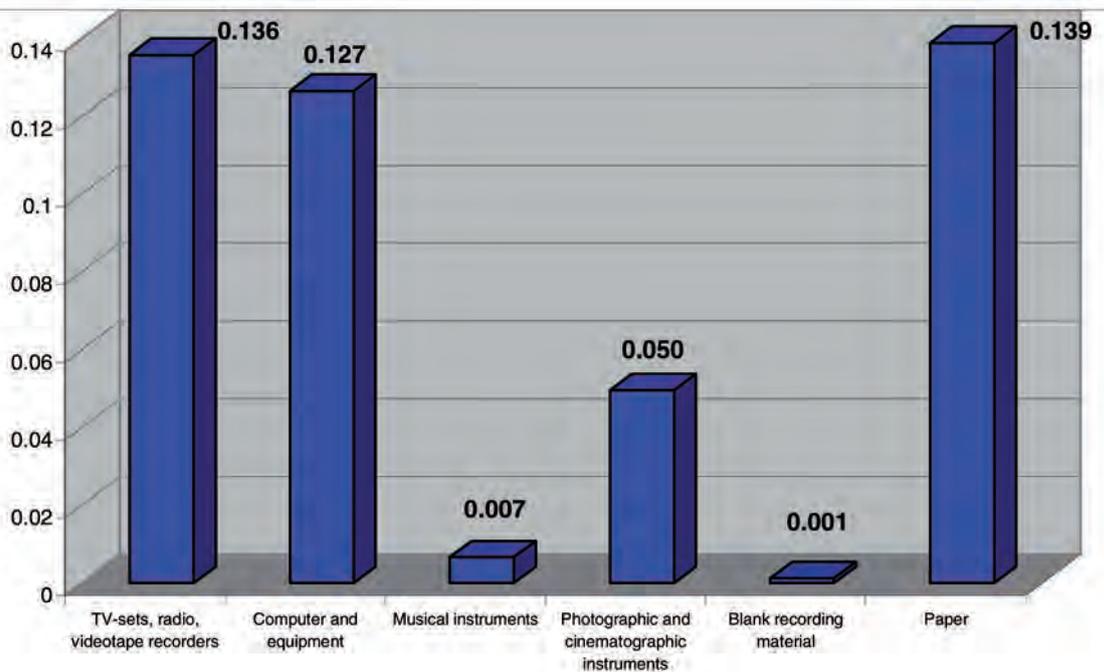


Share of the Interdependent Industries in Terms of GDP and GVA in 2005 (%)

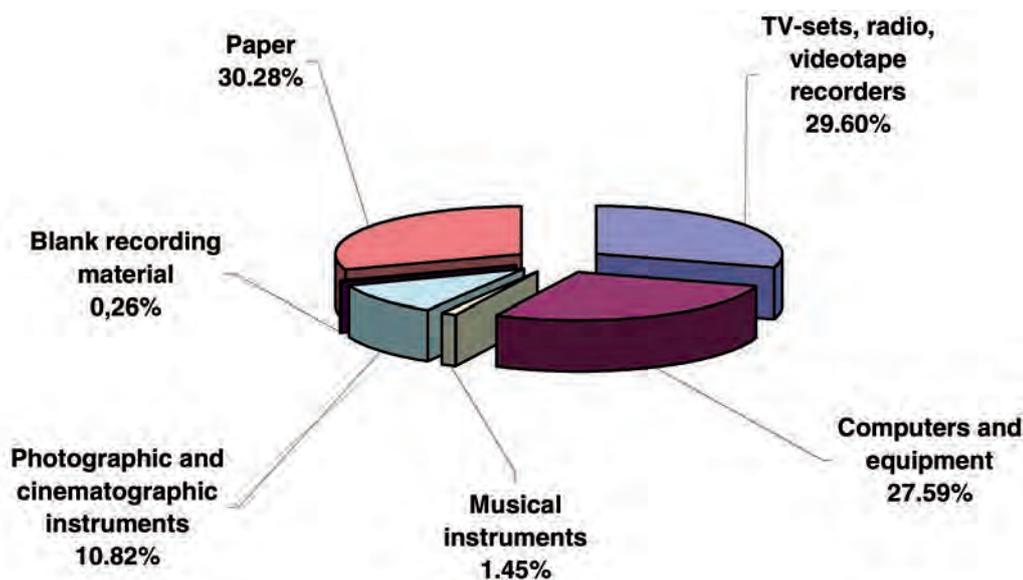


The value added of the interdependent industries in 2005 amounted to 0.76 per cent of total Ukrainian GVA.

The Contribution of the Interdependent Industries in Terms of Employment in 2005 (%)



Share of the Contribution of the Interdependent Industries in Terms of Employment in 2005



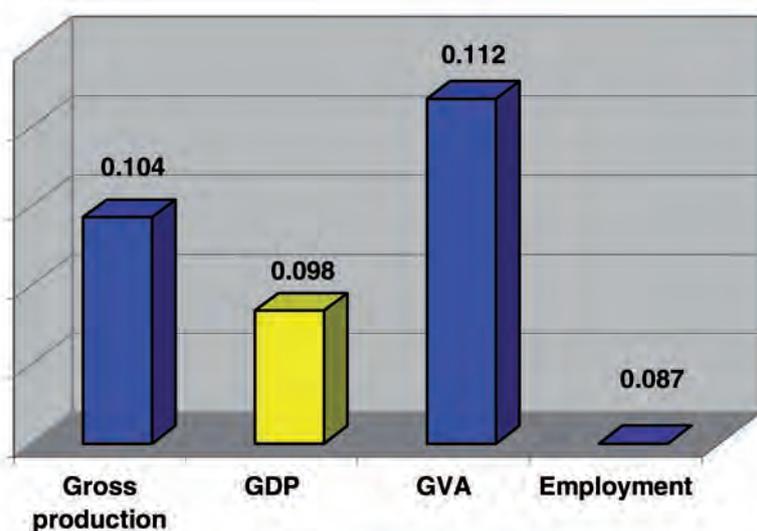
The highest contributors to total employment in Ukraine in 2005 among the interdependent industries were the sectors for paper (0.137 per cent), computers and equipment (0.127 per cent) and TV sets, radio and videotape recorders (0.136 per cent), which together amounted to 0.4 per cent of total national employment or about 87.47 per cent of the total employment of the interdependent industries. In general, this corresponds to their contributions to GDP but according to the data used, the computers and equipment sector requires less manpower, clearly due to automation and the use of modern technologies.

3.4. The Contribution of the Partial Copyright Industries to the Ukrainian Economy in 2005

The industries depending partially on copyright and related rights' protection are known as the partial copyright-based industries. They are not always involved in creation: in most cases those products are created or used in the relevant segment of the partial industries. In order to define the economic effect of copyright, the copyright factor calculated on the basis of research, international comparisons and international experience was applied to the figures for these industries. Thus, the economic results of the industries indicated below have been reduced in conformity with the copyright factor connected with each industry.

The contribution of the partial copyright-based industries to the Ukrainian economy in 2005 amounted to 0.104 per cent of gross production, constituting 1,093.53 million UAH, 0.098 per cent of Ukrainian GDP, or 434.41 million UAH and 0.112 per cent of GVA.

Economic Figures of the Partial Copyright-Based Industries in 2005 (%)

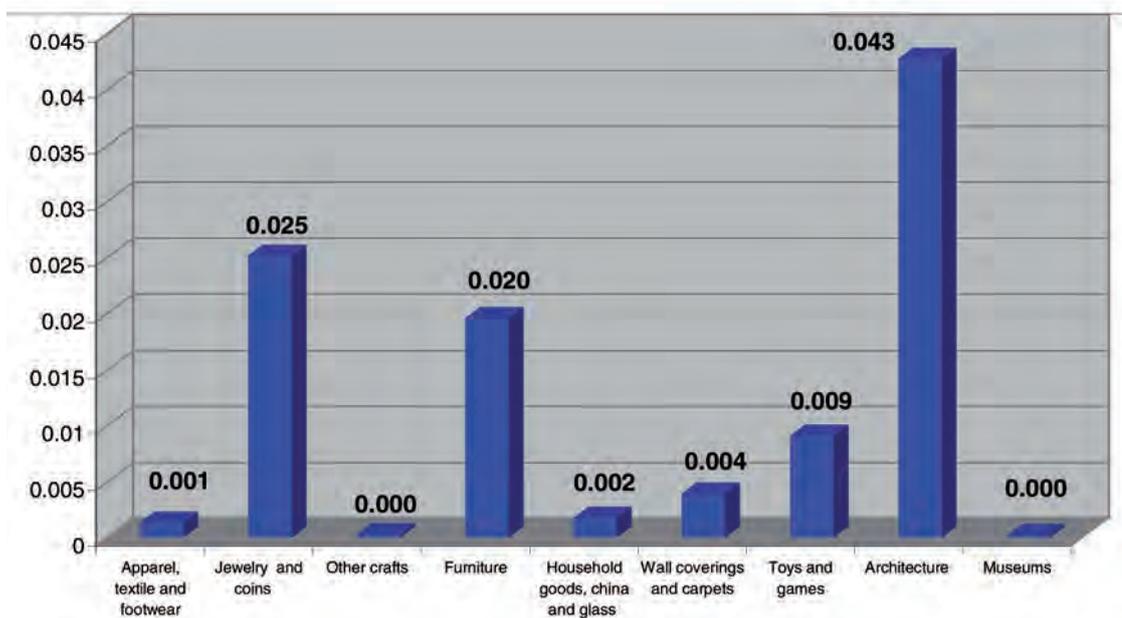


The partial copyright-based industries are in general focused on the wholesale and retail aspects rather than production. However, it is necessary to note that the situation has been improving for several years although it is still very early to speak about the predominance of Ukrainian goods in this market, as the country is primarily an importer of the goods in this category.

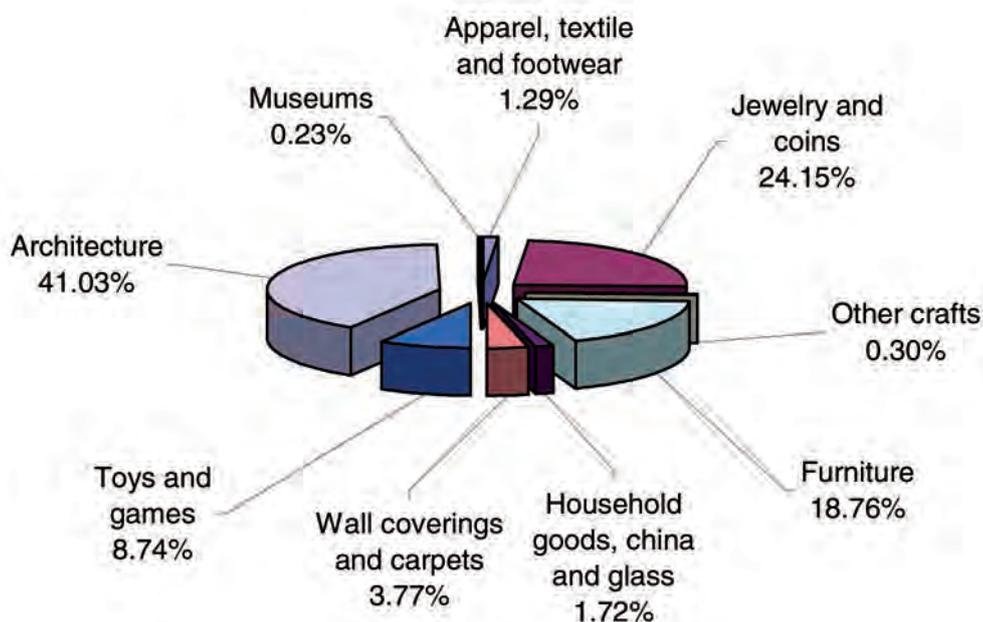
The Contribution of the Partial Copyright-Based Industries to the Ukrainian Economy in 2005

Partial Copyright-Based Industries	Gross Production		Value Added			Number Employed	
	UAH ('000'000)	%	UAH ('000'000)	% of GDP	% of GVA	employees ('000)	%
Apparel, textiles and footwear	14,122	0.001	5,155	0.001	0.001	307	0.002
Jewelry and coins	264,141	0.025	106,259	0.024	0.027	3,659	0.019
Other craft objects	3,300	0.000	1,298	0.000	0.000	0,086	0.000
Furniture	205,174	0.020	57,650	0.013	0.015	2,995	0.016
Household goods, china and glass	18,762	0.002	6,017	0.001	0.002	247	0.001
Wall coverings and carpets	41,273	0.004	8,983	0.002	0.002	0,194	0.001
Toys and games	95,553	0.009	32,166	0.007	0.008	1,559	0.008
Architecture	448,664	0.043	214,806	0.049	0.055	7,331	0.039
Museums	2,545	0.000	2,080	0.000	0.001	102	0.001
Total	1,093,533	0.104	434,412	0.098	0.112	16,480	0.087
Economy of Ukraine	1048481	100	441452	100		18886.5	100

Share of the Partial Copyright-Based Industries Based on Gross Production in 2005 (%)

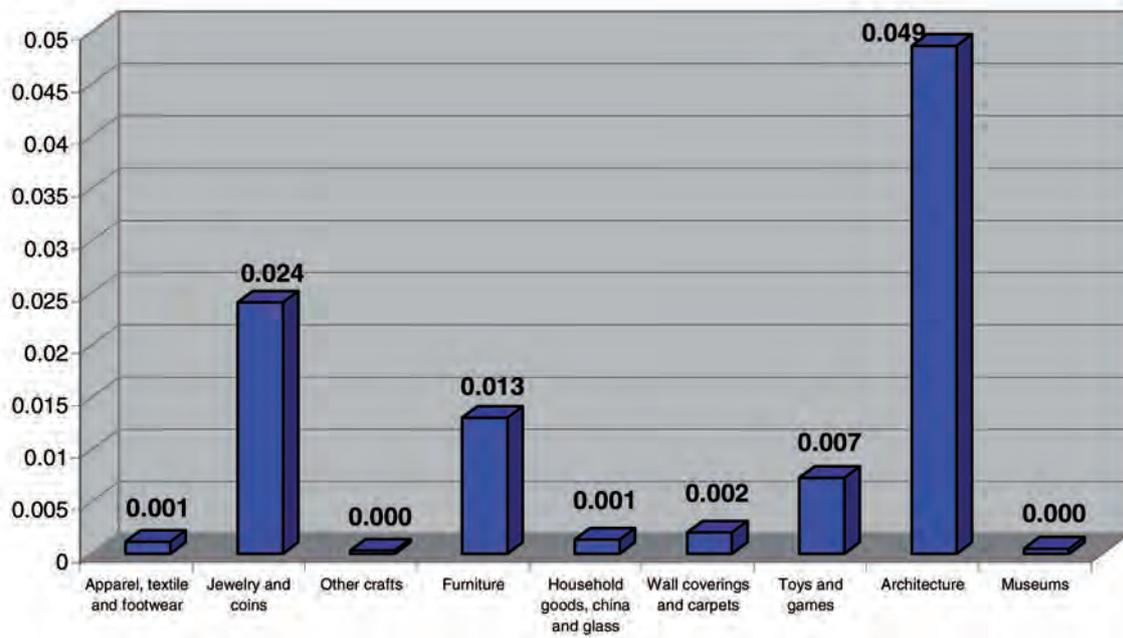


Share of the Contribution of the Partial Copyright-Based Industries Based on Gross Production in 2005

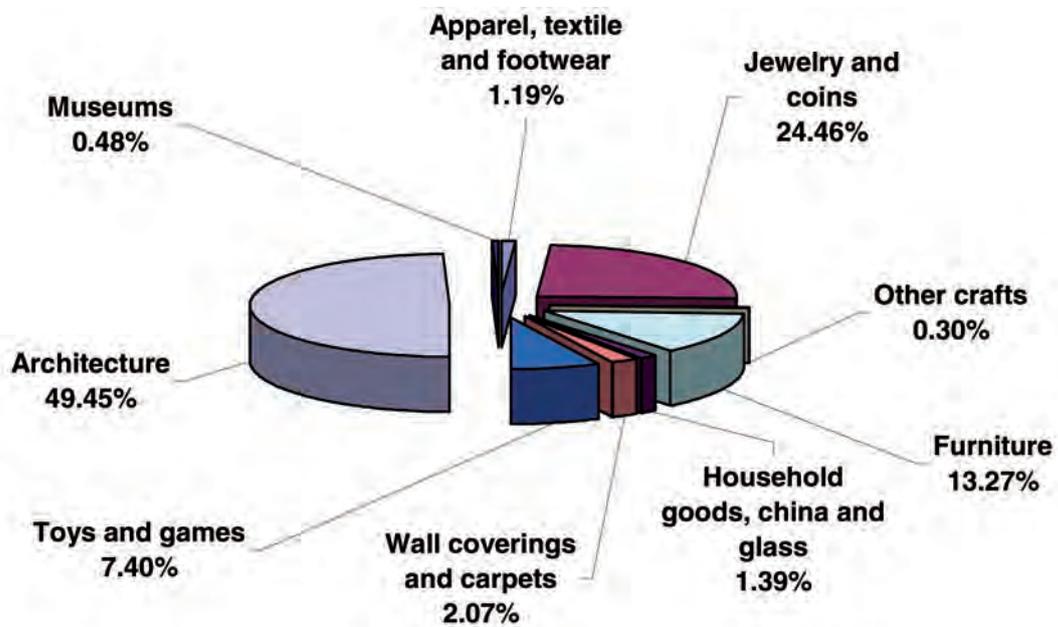


The main economic contributors in the group of partial copyright industries are the following sectors: architecture, jewelry and coins, furniture, toys and games. Together, these industries amount to 92.68 per cent of the group contribution to gross production and 94.58 per cent of the group contribution to GDP. At the same time it is necessary to remember that architecture is the largest sector within the group, accounting for 41.03 per cent of its gross production and 49.45 per cent of its contribution to GDP.

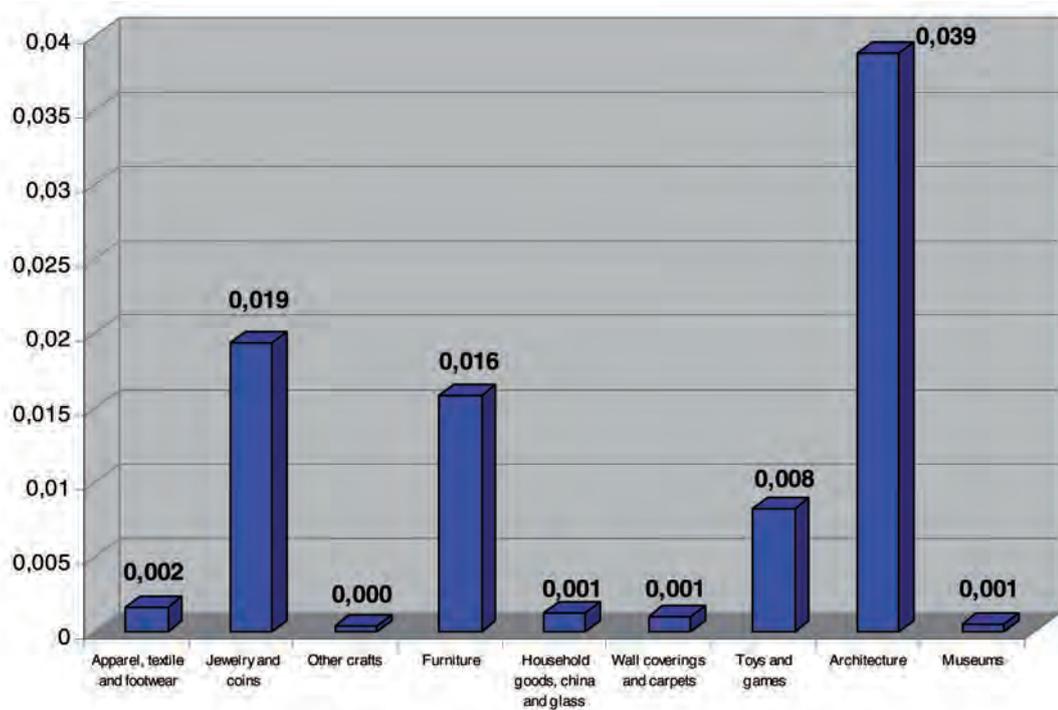
The Contribution of the Partial Copyright-Based Industries in Terms of Employment in 2005 (%)



Share of the Contribution of the Partial Copyright-Based Industries Based on GDP in 2005

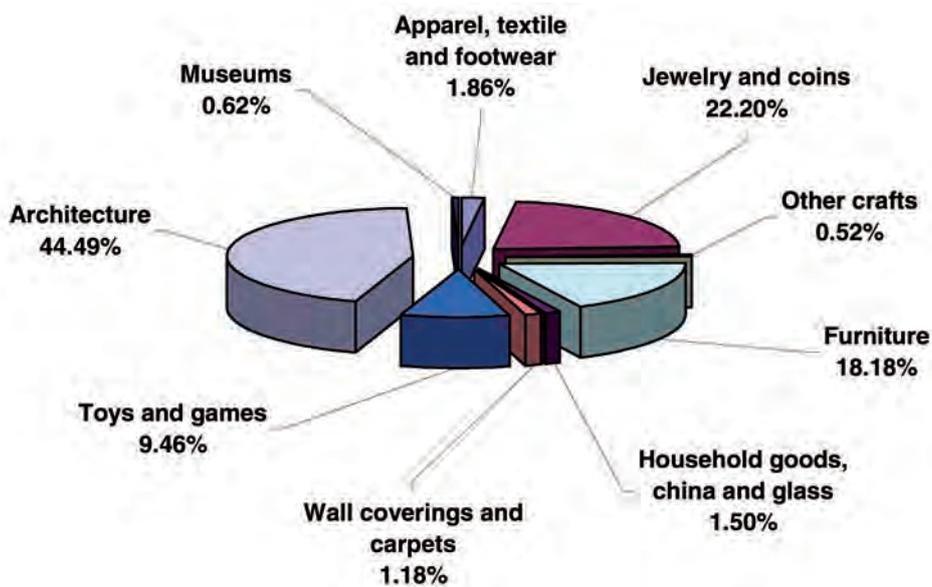


The Contribution of the Partial Copyright-Based Industries in Terms of Employment in 2005 (%)



As we can see from the above tables, architecture, jewelry and coins, furniture, toys and games together constitute 94.58 per cent of the group contribution to employment. At the same time it can be seen that architecture accounts for 49.45 per cent of the total.

Share of the Contribution of the Partial Copyright-Based Industries in Terms of Employment in 2005

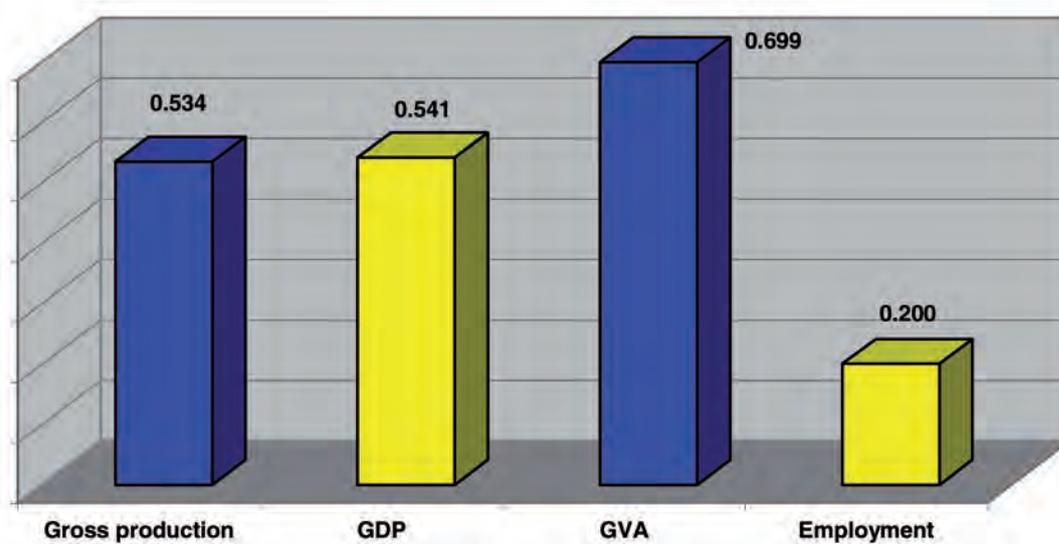


3.5. The Contribution of the Non-Dedicated Copyright Industries to the Ukrainian Economy in 2005

The non-dedicated copyright-based industries are not directly related to the creation of materials and products relating to copyright and related rights and protected by law. These industries are involved in the sale, distribution, transportation, broadcasting and making available to the public of materials and products created by the three other copyright-based industries. The economic contribution of the non-dedicated copyright-based industries was calculated through the use of a generally accepted international approach,²⁰ presuming that it is equal to the total contribution of all copyright-based industries to GDP. We found this ratio to be equal to 0.023.

Thus, the contribution of the non-dedicated copyright-based industries to the economy amounted to 0.54 per cent of GDP or 2,389.5 million UAH, and 0.53 per cent of gross production or 5,596.4 million UAH in 2005. The contribution of the non-dedicated copyright-based industries to employment in Ukraine constituted 0.2 per cent of the total number of people employed, *i.e.*, 37,741 thousand workers.

The Economic Figures for the Non-Dedicated Copyright-Based Industries in 2005 (%)

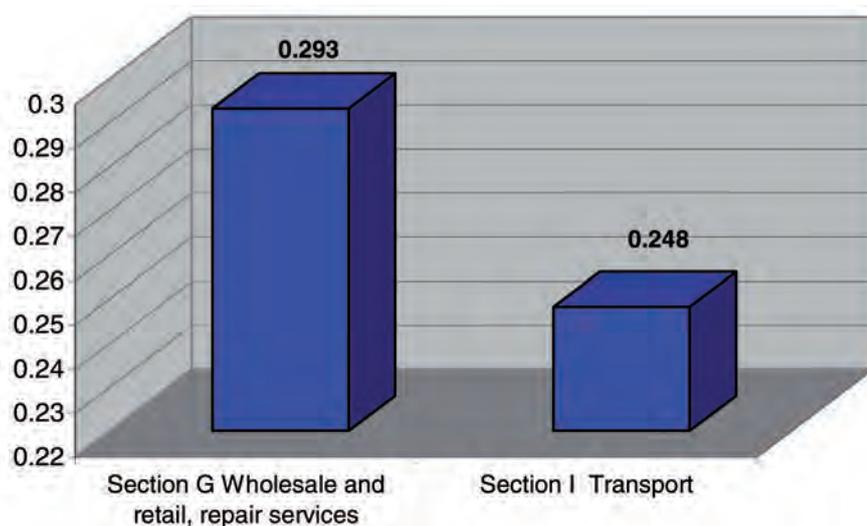


²⁰ Stephen E. Siwek and Harold W. Furchtgott-Roth, *Copyright Industries in the U.S. Economy*, 1990, Appendix B-6

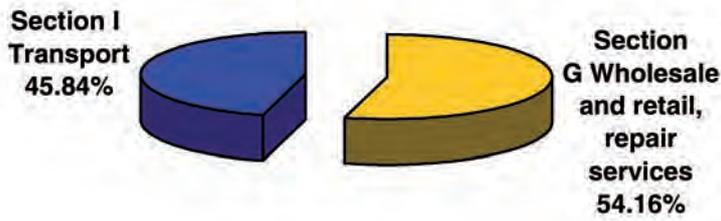
The Contribution of the Non-Dedicated Copyright Industries to the Ukrainian Economy in 2005

Non-Dedicated Copyright Industries	Gross Production		Value Added			Number Employed	
	UAH ('000'000)	%	UAH ('000'000)	% of GDP	% of GVA	employees ('000)	%
Section G: Wholesale and retail; trade in motor vehicles; repair services	2,921,979	0.279	1,294,105	0.293	0.378	19,115	0.101
Section I: Transport	2,674,439	0.255	1,095,374	0.248	0.320	18,626	0.099
Total	5,596,418	0.534	2,389,479	0.541	0.699	37,741	0.200
Economy of Ukraine	1048481	100	441452	100		18886.5	100

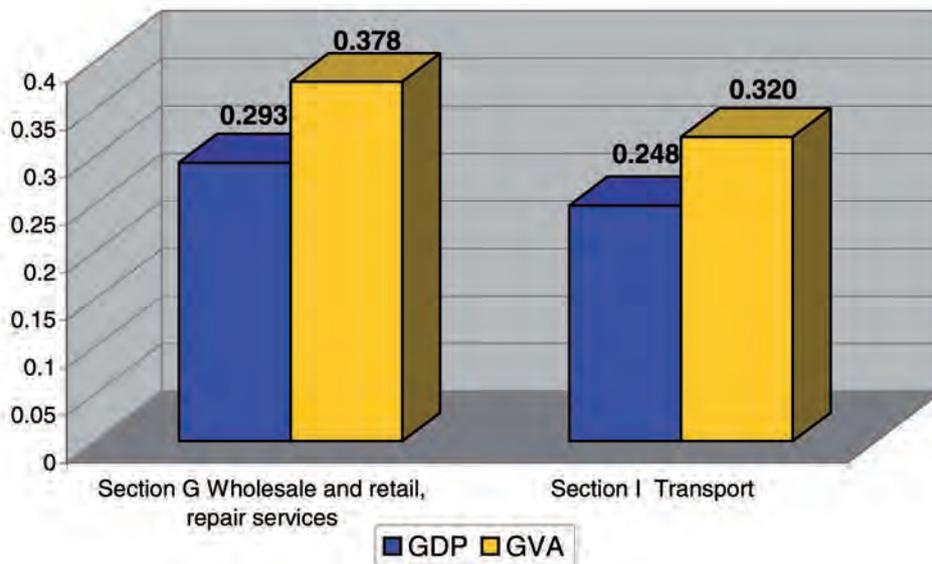
The Contribution of the Non-Dedicated Copyright Industries to Ukrainian GDP in 2005 (%)



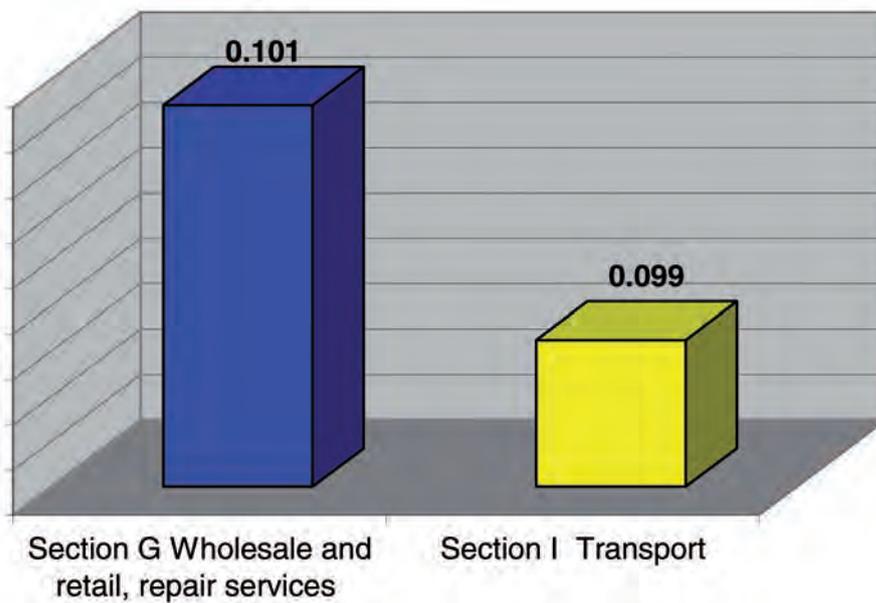
Share of the Contribution of the Non-Dedicated Copyright Industries in Terms of GDP in 2005



Share of the Non-dedicated Copyright-Based Industries in Terms of GDP and GVA in 2005 (%)

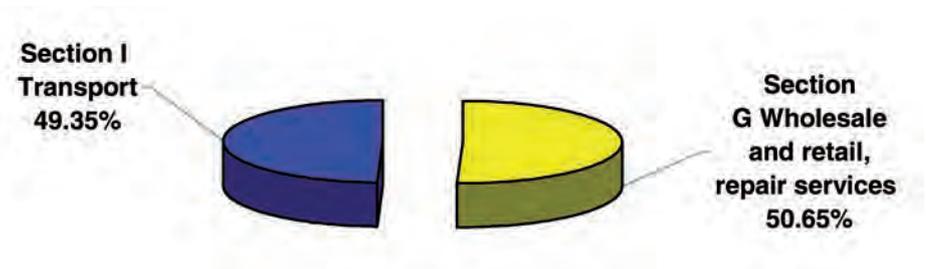


The Contribution of the Non-Dedicated Copyright-Based Industries in Terms of Employment in 2005 (%)





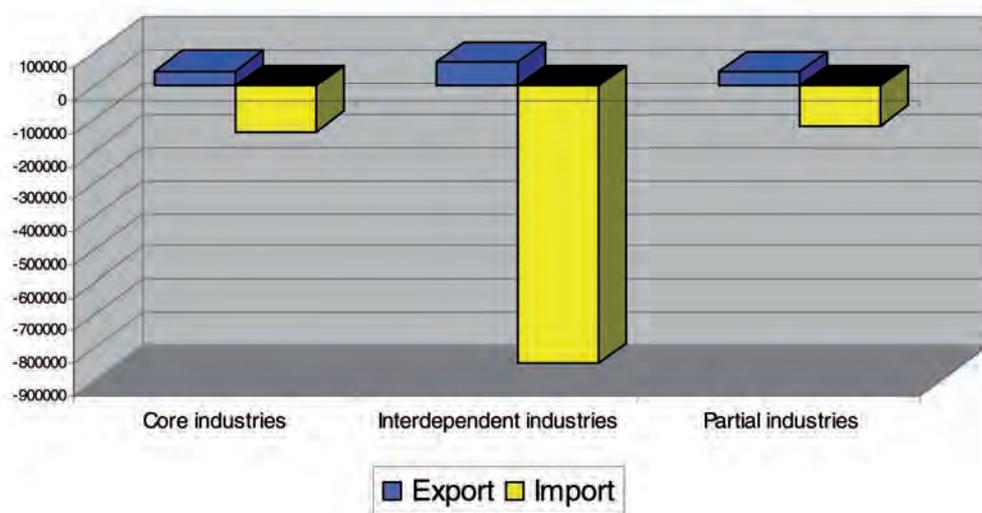
Share of the Contribution of the Non-Dedicated Copyright-Based Industries in Terms of Employment in 2005



3.6. The Contribution of the Copyright-Based Industries to Foreign Trade

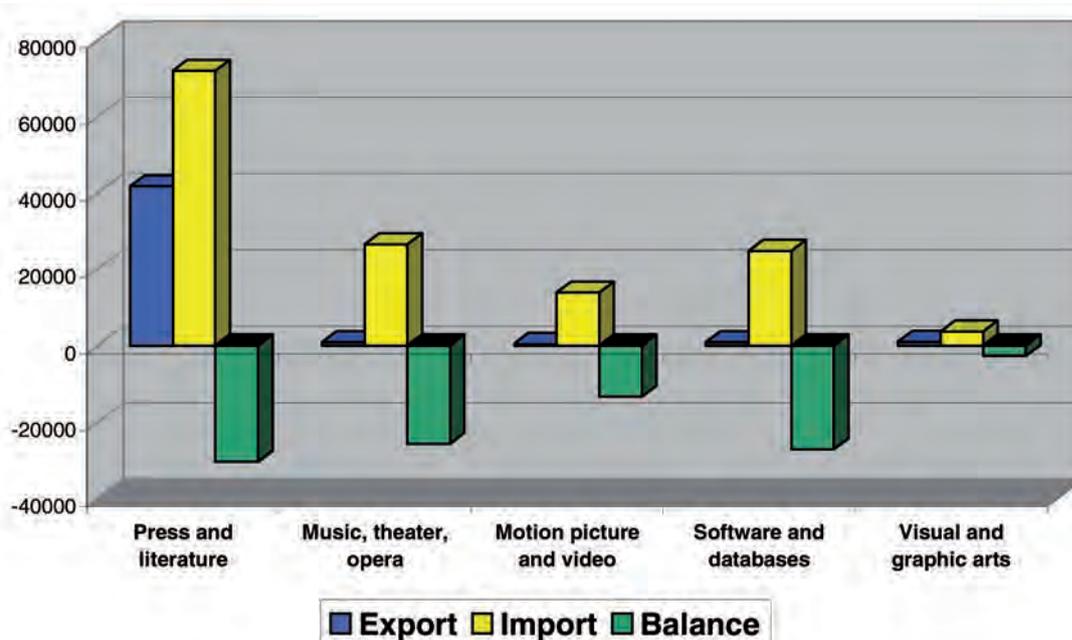
In carrying out an analysis of foreign trade, it is possible to distinguish between the sectors of the economy, which are important in terms of development and which require more careful consideration by those responsible for state policy. It should be noted that the value of copyright and related rights to Ukrainian foreign trade, as in many other countries, is very difficult to define. This is due to the fact that when movies, music and computer programs cross borders, only the physical value of the carrier is indicated. However, in the case of art works, such value will correspond to the real value of the carrier and copyright. In view of this, the study on the contribution of the copyright and related rights industries to the foreign trade of Ukraine was based on several sources. The primary sources of information were: the Ukrainian Classification of Foreign Economic Activities and the Classification of Foreign Trade Services. Since these two sources do not reflect financial transactions of license payments and royalties, the information from the National Bank of Ukraine was used as an additional source, containing the data from the Classification of Foreign Trade Services and the data on bank transactions of license payments and royalties in the most aggregated form. The value of the export of goods related to copyright and related rights in 2005 year accounted for 157,269.41 thousand US dollars,²¹ or 0.46 per cent of all exports for that year. The value of the import of goods related to copyright and related rights in 2005 accounted for 955,429.69 thousand US dollars or 51.5 per cent of the general trade deficit. Thus, the cost of importing these goods is approximately seven times greater than earnings from exports.

Foreign Trade in Copyright and Related Rights Goods (%)



²¹ Value of goods and services in the foreign trade statistics is reflected in US dollars (US\$).

Foreign Trade in the Core Copyright-Based Industries products in 2005 (Thousands USD)



The core copyright industries, due to the reasons discussed below, are not fully reflected in the Ukrainian Classification of Foreign Economic Activities. Among them is reflected the physical value of the carrier when crossing borders, as well as the importance of the core industries to the service sector. Thus, in 2005, the value of exports related to the core industries comprised 44,564.67 thousand US dollars or 0.13 per cent of the total volume of exports. Imports for the core industries amounted to 140,607.82 thousand US dollars or 0.39 per cent of the total volume of imports. Detailed examination of the following table confirms that a negative trade balance is characteristic for all the core industries and testifies to insufficient development of this segment in the Ukrainian economy. Only in relation to the press and literature sector can high export volumes be seen, with the volume of imports considerably exceeding that of exports from the other sectors.²²

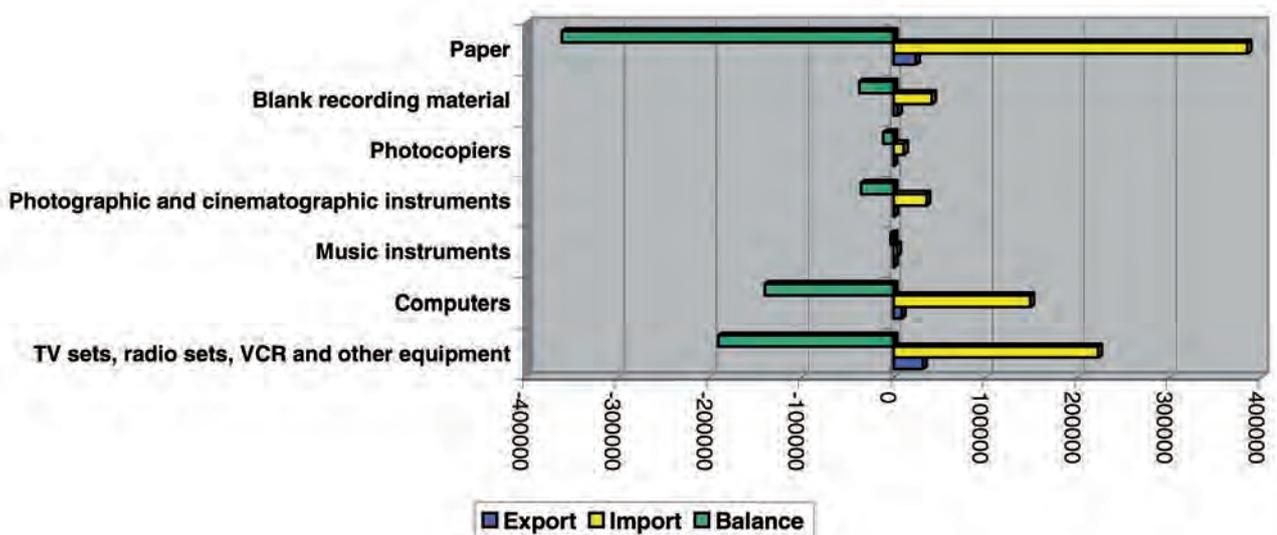
²¹ The sectors for music, theater, opera (partially), films and video games (entirely), software and databases (entirely) are indicated in the Foreign Trade Goods Statistics under code 8524000000: "Records, films and other carriers for recording sound or similar record, recorded, including matrices and forms for records production." In view of this, an additional study was made. The basis for such a study was an assumption that certain groups of goods are exported and imported in accordance with demand. By processing the data from the State Department of Intellectual Property of the Ukraine on the control marks for distribution of copies of audiovisual works, phonograms, videos, software and databases, we identified corresponding rates for fund allocation of the mentioned statistical code. The results of the study are presented in the chapter entitled Basic Development Trends of Some Core Copyright-Based Industries.

The Contribution of the Core Copyright-Based Industries to Foreign Trade in 2005

Core Industries	Exports ('000 US\$)	%	Imports ('000 US\$)	%
Press and literature	41,655.73	0.121	72,029.14	0.199
Music, theater, opera	801.74	0.002	26,518.80	0.073
Motion picture and video	416.98	0.001	13,768.22	0.038
Software and databases	748.20	0.002	24,704.86	0.068
Visual and graphic arts	942.02	0.003	3,586.82	0.010
Total	44,564.67	0.130	140,607.82	0.389
Total volume of foreign trade	34,286,748.26	100	36,141,094.96	100

The interdependent copyright-based industries are more easily defined by means of the Ukrainian Classification of Foreign Economic Activities than the core industries, as the majority of the industries in this segment are engaged in the production of certain material values—goods for consumption of copyright and related rights objects, their transfer and production. Interdependent industries have the largest share in foreign trade in accordance with this classification. The contribution of the interdependent industries comprised 71,226.87 thousand US dollars in 2005 or 0.21 per cent from aggregated exports. The import share of the interdependent industries was more substantial and comprised 848,853.49 thousand US dollars or 2.35 per cent of the total volume of imports.

Foreign Trade of the Interdependent Copyright and Related Rights Industries



The goods with the largest share of foreign trade among the interdependent industries are those which cover items such as television sets, radios, and video cassette recorders (VCRs).

Foreign Trade of the Interdependent Copyright Industries in 2005

Interdependent Industries	Exports (‘000 US\$)	%	Imports (‘000 US\$)	%
TV sets, radio sets and others	31,948,218	0.0932	222,464,997	0.62
Computers	8,862,359	0.0258	148,550,781	0.41
Musical instruments	381,170	0.0011	3,807,250	0.01
Photographic and cinematographic instruments	895,115	0.0026	35,936,605	0.10
Photocopiers	153,251	0.0004	11,351,707	0.03
Blank recording material	4,691,957	0.0137	41,757,624	0.12
Paper	24 294.80	0.0709	384,984.53	1.07
Total	71,226,871	0.2077	848,853,490	2.35
Total volume of goods in foreign trade of Ukraine	34,286,748.26	100	36,141,094.96	100

High import figures for television sets, radios and VCRs can be explained by several factors. On the one hand, few high-technology products in this sector are produced in Ukraine and, on the other, the rapid development of television, radio and digital media has created a considerable domestic demand, which comprised 0.62 per cent of the aggregate imports.

Computers were responsible for 0.41 per cent of imports, resulting from slow development of the high-tech industry in Ukraine.

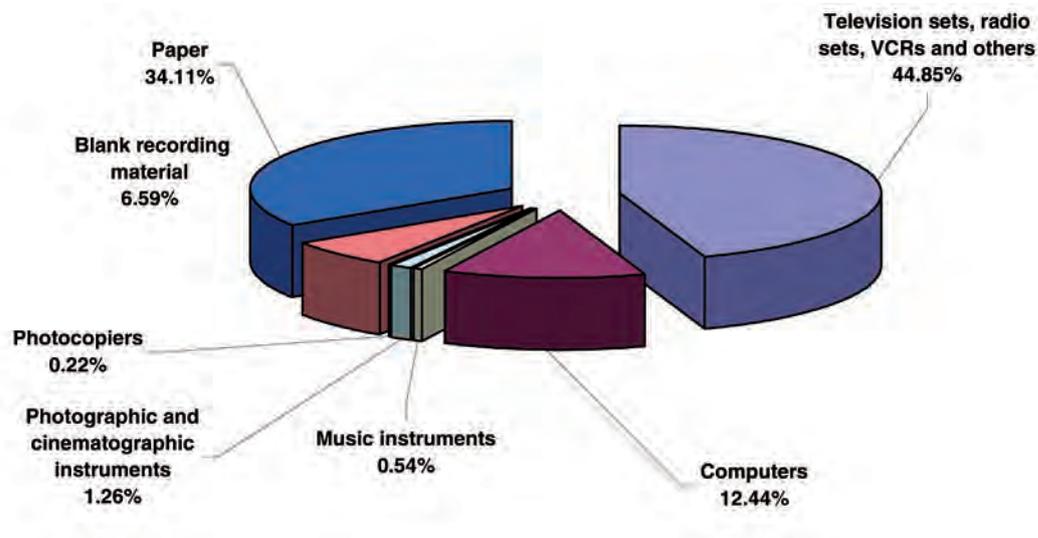
Low export volumes in the sectors mentioned can be explained by the re-export of certain products.

The highest level of imports in Ukraine concerned the paper sector, which is of great importance to the core copyright industries such as press and literature, advertising, etc. The significant contribution of this sector to the national economy was not only found in Ukraine, but was also observed in Bulgaria.²³ In Ukraine, it can be explained by protectionism surrounding the publishing business and the wide range of tax concessions for the import of some materials.²⁴

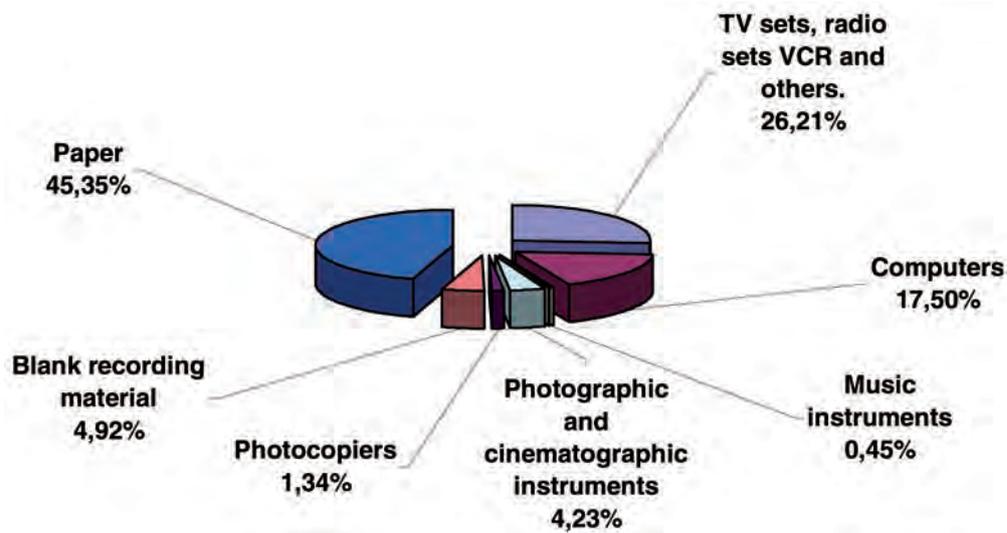
²³ Ivan Tchalakov, Vladya Borisova, Donka Keskinova, Georgi Damyanov, Rossitza Arkova, Tsveta Andreeva, Jordan Kalchev, Todor Todorov, *The Economic Contribution of Copyright-Based Industries in Bulgaria, 2007*.

²⁴ Details are in the chapter on "Basic Development Trends of Some Core Copyright Industries."

Export Figures for the Interdependent Copyright Industries in 2005



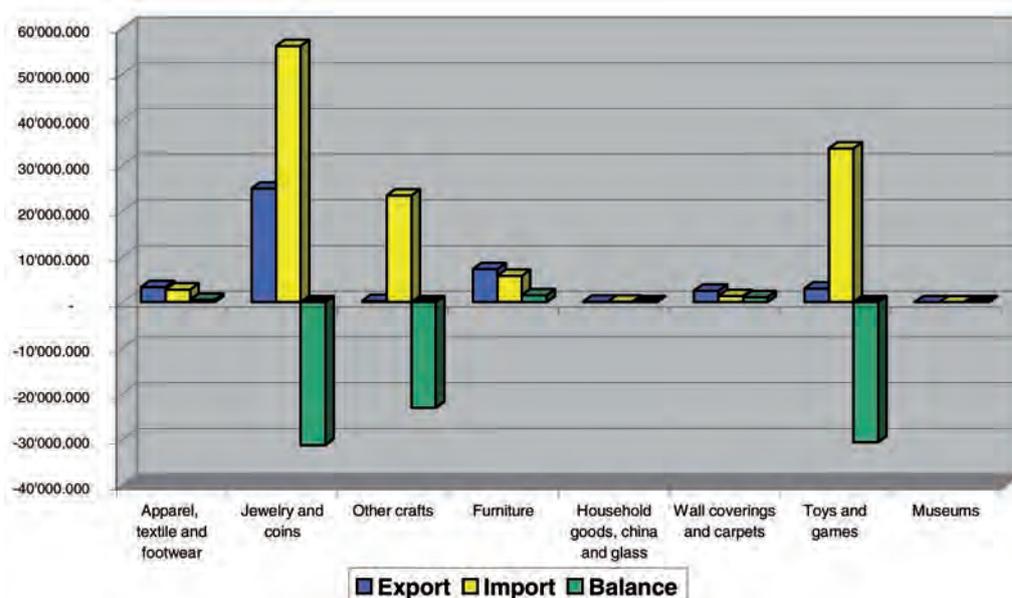
Import Figures for the Interdependent Copyright Industries in 2005



When summarizing the export-import of goods of interdependent industries in Ukraine, it should be noted that in spite of considerable volumes in the paper sector, the share of scientific and high-technology goods is larger and testifies to the necessity of taking certain steps and generating a corresponding state policy aimed at the development of high-tech industries, including attracting foreign investment and technologies.

The partial copyright industries are also well represented in the statistics for foreign economic activity, as they mainly concern the manufacture of objects such as apparel, houseware, furniture, jewelry, toys, etc. The total export share of the partial industries amounts to 41,477.87 thousand US dollars or 0.121 per cent, whereas imports amounted to 123,228.79 thousand US dollars or 0.34 per cent of the aggregate amount of imports. It should be noted that the sectors with the highest level of imports were: jewelry and coins, other crafts, toys and games. However there was a small but positive balance for apparel, textiles and footwear, furniture, wall coverings and carpets.

Foreign Trade in the Partial Copyright Industries in 2005 ('000 US\$)

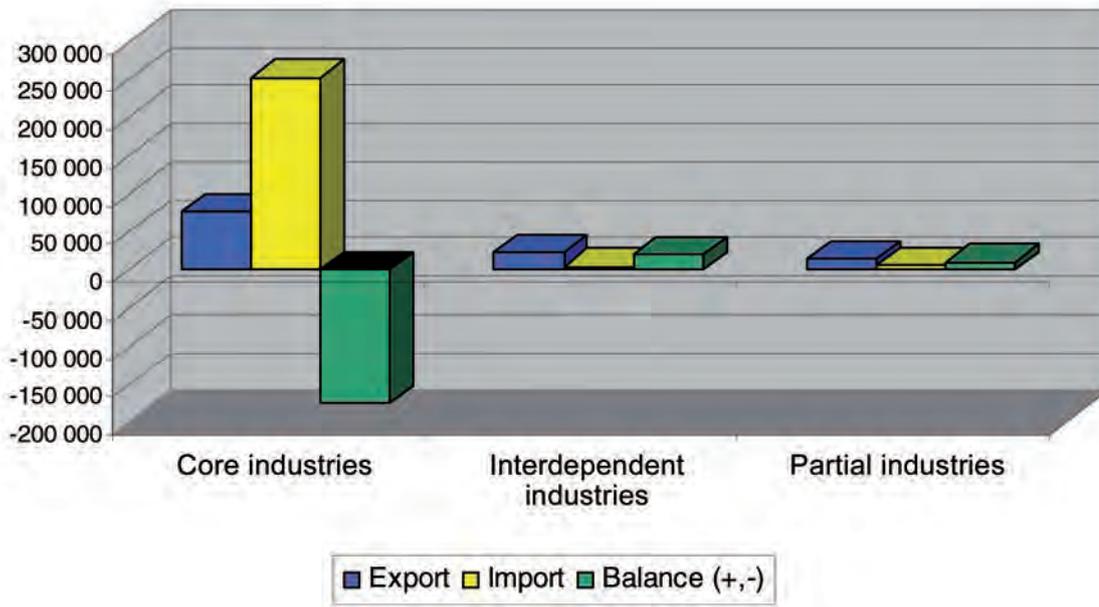


Foreign Trade in the Partial Copyright Industries in 2005 ('000 US\$)

Partial Industries	Exports ('000 US\$)	%	Imports ('000 US\$)	%
Apparel, textiles and footwear	3,342.02	0.010	2,807.44	0.008
Jewelry and coins	24,860.03	0.073	56,085.01	0.155
Other crafts	264.38	0.001	23,374.25	0.065
Furniture	7,297.45	0.021	5,769.07	0.016
Household goods, china and glass	145.89	0.000	155.03	0.000
Wall coverings and carpets	2,508.06	0.007	1,377.42	0.004
Toys and games	3,045.84	0.009	33,640.52	0.093
Museums	14.21	0.000	20.05	0.000
Total	41,477.87	0.121	123,228.79	0.341
Total volume of goods	34,286,748.26	100	36,141,094.96	100

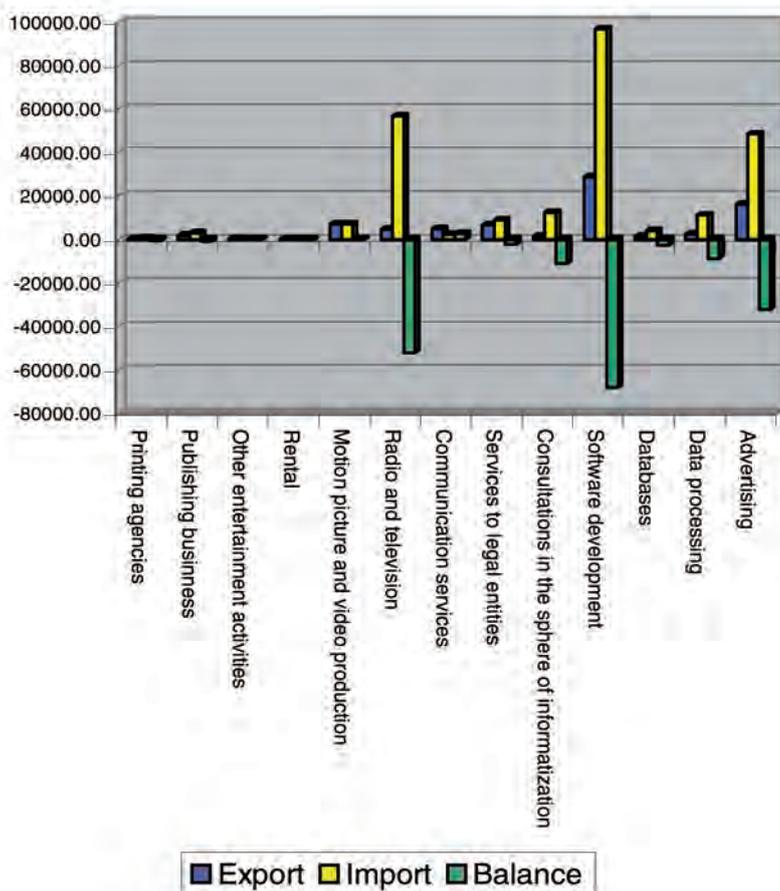
Classification under foreign economic activity allows the services provided by the copyright and related rights industries to be reflected. This classification closely corresponds with the Classification of Economic Activity in Ukraine; however, it contains a somewhat lower level of detail. On the basis of high aggregation of the apparent data in this classification, it was only possible to divide data into the core, interdependent and partial industries. In the majority of cases one code included several different activities, thus greater detail became inappropriate. For example, code 22: services in publishing, the printing industry and copying of printed materials also includes: copying of software; copying of motion pictures and video films from originals; printing of promotional materials.

Foreign Trade of the Copyright-Based Industries in 2005



Export volumes for the CIs in 2005 amounted to 110,612.67 thousand US dollars or 1.80 per cent of the aggregate export volume. The total share of imports amounted to 259,176.41 thousand US dollars or 8.90 per cent of the total volume of imports.

Foreign Trade in the Core Copyright Industries in 2005 ('000 US\$)



Regarding the core copyright industries in terms of foreign trade, it represents 74,909.21 thousand US dollars in the export of services or 1.22 per cent of the total volume of service exports. At the same time, the major share of exports was occupied by the software development sector, which is estimated at 2,8603.68 thousand US dollars or 0.47 per cent of total exports. It should be emphasized that the industries related to software development are developing rapidly. That is why the services related to consultations in informatization, software development, databases and data processing made up nearly one half or 0.55 per cent of the core industry sector and represented 33,620.05 thousand US dollars. The share of these industries was impressive and constituted 124,175.17 thousand US dollars or approximately one half of the share of all CIs and 4.27 per cent of the total volume of imports.

Moreover, attention should be paid to the radio and television sector, the second highest for imports (1.95 per cent) and only the fifth highest for exports (0.075 per cent) among the core copyright industries. Advertising is also of considerable importance to foreign trade, and it is developing steadily. Its share of exports was the second highest (0.26 per cent) and its share of imports was the third highest (1.66 per cent). In foreign trade, the cinematography and video production sector showed a balance: imports constituted 6,976.70 thousand US dollars and exports accounted for 7,133.36 thousand US dollars.

Foreign Trade in the Core Copyright Industries in 2005 ('000 US\$)

Core Industries	Exports	%	Imports	%	Balance
Printing agencies	64.66	0.001	682.63	0.023	-617.97
Publishing	1,870.98	0.030	2951.84	0.101	-1,080.86
Other entertainment activities	279.02	0.005	67.20	0.002	211.82
Rentals ²⁵	0.12	0.000	250.40	0.009	-250.28
Motion picture and video production	6,976.70	0.114	7133.36	0.245	-156.66
Radio and television	4,596.85	0.075	56703.96	1.948	-52,107.11
Communication services	4,844.35	0.079	2174.63	0.075	2,669.72
Services to legal entities	6,531.53	0.106	8819.48	0.303	-2,287.95
Consultations in informatization	1,249.77	0.020	12302.11	0.423	-11,052.34
Software development	28,603.68	0.466	96771.85	3.324	-68,168.17
Databases	1,351.56	0.022	3963.96	0.136	-2,612.40
Data processing	2,415.04	0.039	11137.25	0.383	-8,722.21
Advertising	16,124.95	0.263	48447.56	1.664	-32,322.61
Total	74,909.21	1.221	251406.23	8.637	-176,497.02
Total for services in the foreign trade sector	6134700	100	2910900	100	3223800

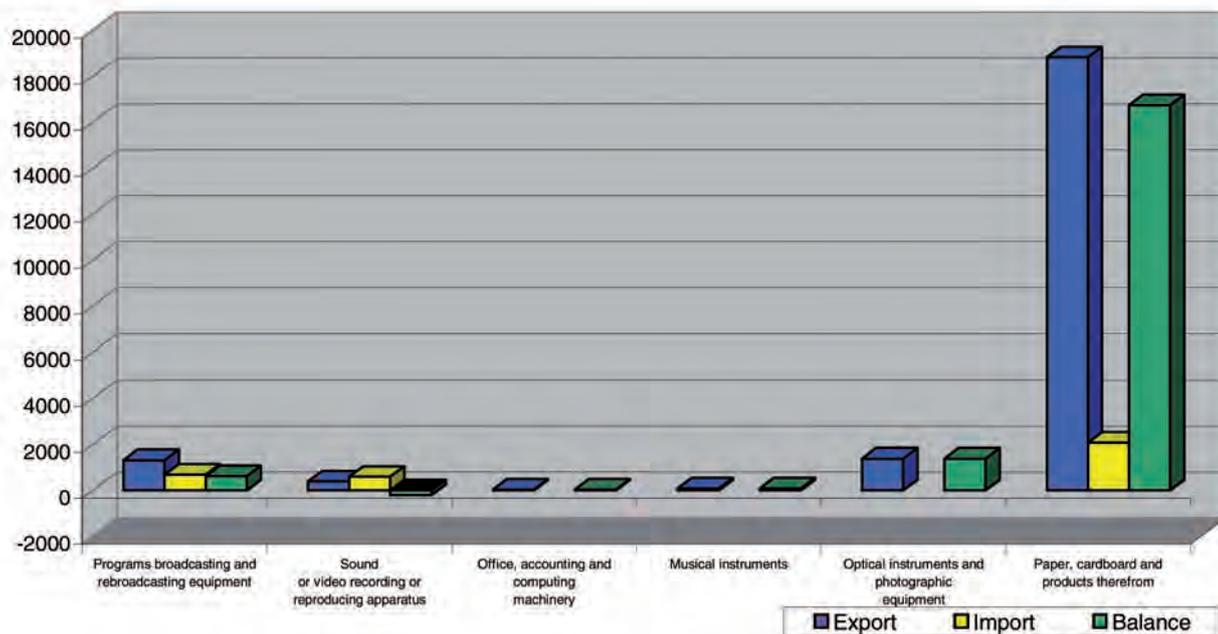
It should be mentioned that the core CIs have considerable influence over foreign trade in the service sectors.

The above-mentioned industries have the highest export-import rates among all copyright and related rights industries and show promise for potential export growth.

The interdependent industries are characterized by their contribution to total exports: 22,014.04 thousand US dollars or 0.36 per cent of the aggregate export volume. The contribution of the interdependent industries to imports amounted to 3,361.06 thousand US dollars or 0.12 per cent.

²⁵ On conducting the analysis of statistical indicators, it was discovered that the sectors concerning rental, communication services and services to legal entities also included, besides the core copyright industries, the economic influence of other industries. In view of this and to define the share of copyright, it was decided to use the factor 0.025 in export-import indicators for these industries.

Foreign Trade in Services Related to the Interdependent Copyright Industries in 2005 ('000s US\$)



Foreign Trade in Services Related to the Interdependent Copyright Industries in 2005 ('000 US\$)

Interdependent Industries	Exports	Imports	Balance
Broadcasting and rebroadcasting equipment	1,310.52	688.06	622.46
Sound/video recording or reproduction apparatus	384.06	591.88	-207.82
Office accounting and computing machinery	38.10	38.10	38.10
Musical instruments	80.38	80.38	80.38
Optical instruments and photographic equipment	1,378.80	0	1,378.80
Paper, cardboard and products therefrom	18,822.18	2,081.12	16,741.06

Analyzing the services in the interdependent copyright and related rights industries, the most active sector is paper, cardboard and products derived therefrom, with a trade surplus of 16,741.06 thousand US dollars, based on the imports of raw materials for the sector, estimated at 384,984.53 thousand US dollars. It can be assumed that part of the input is consumed in the domestic market, whereas part is exported, making this sector attractive for further development and growth in the volume of export services. The services in the other sectors are not highly significant and do not apply to every country surveyed. For example, services from the office accounting and computing machinery sector were imported only by the US; services from the musical instrument sector were imported only by the Netherlands; services from optical instruments and photographic equipment sector only by the Russian Federation.

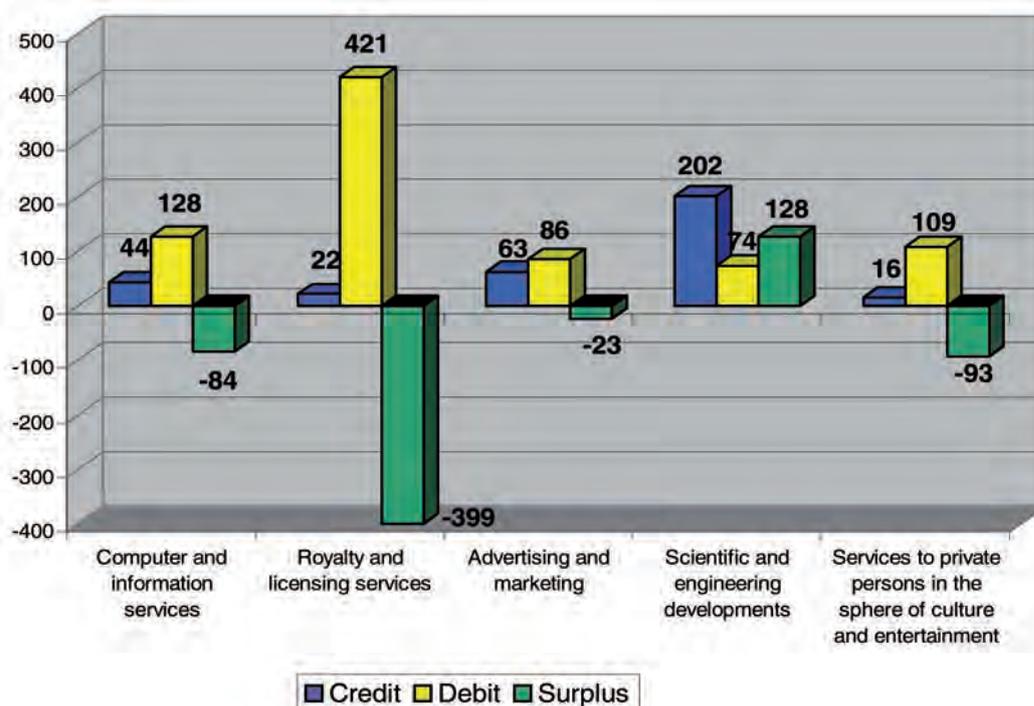
After taking account of the copyright factor, the partial industries were estimated at 13,689.42 thousand US dollars or 0.22 per cent of export services, and 4,409.12 thousand US dollars (0.15 per cent) of imports, giving a positive surplus of 9,280.30 thousand US dollars. The architecture and building sector made up 91 per cent of service exports and 99 per cent of service imports.

Foreign Trade in Services Related to the Partial Copyright Industries in 2005 ('000 US\$)

Partial Industries	Exports	Imports	Net
Made-up apparel and fur	139.20	1.33	137.87
Textile industry	3.18		3.18
Leather and leather footwear	27.54	4.12	23.42
Jewelry and other adornments	200.56		200.56
Furniture	817.82	6.81	811.01
Non-metal mineral products	2.32	1.55	0.77
Wood working and production of wooden goods	34.15	0.82	33.33
Metal working	30.20	9.32	20.88
Architecture and building	12,310.38	4,326.00	7,984.38
Wall coverings and carpets	6.50	8.09	-1.59
Other building implementation activities	89.51	33.12	56.39
Other activities in the sphere of culture	28.07	17.96	10.11

A supplementary source of information on the contribution of the CIs to foreign trade was the balance of payments of the National Bank of Ukraine. It reflects the Classification of the Foreign Trade Service Activities and information regarding bank transfers in a much aggregated form. However, the balance of payments provides an opportunity to outline the general trends for foreign economic services.

Trade Balance of the Copyright-Based Industries in 2005 ('000'000 US\$)



In 2005 and in accordance with the above information, exports of services comprised 347 million US dollars and imports 818 million US dollars giving a negative balance of 471 million US dollars. Hence it should be mentioned that the royalty and licensing sector also included services related to industrial property and the scientific and engineering development sector was not fully dependent on copyright, though it was the only sector with a positive foreign trade balance. Services to private individuals in the sector relating to culture and entertainment included information on payments, connected with filmmaking, radio and television programs, and payment for use of airtime, broadcasting of radio and television programs, screening of television and feature films, services related to museums, libraries, sporting events and culture.

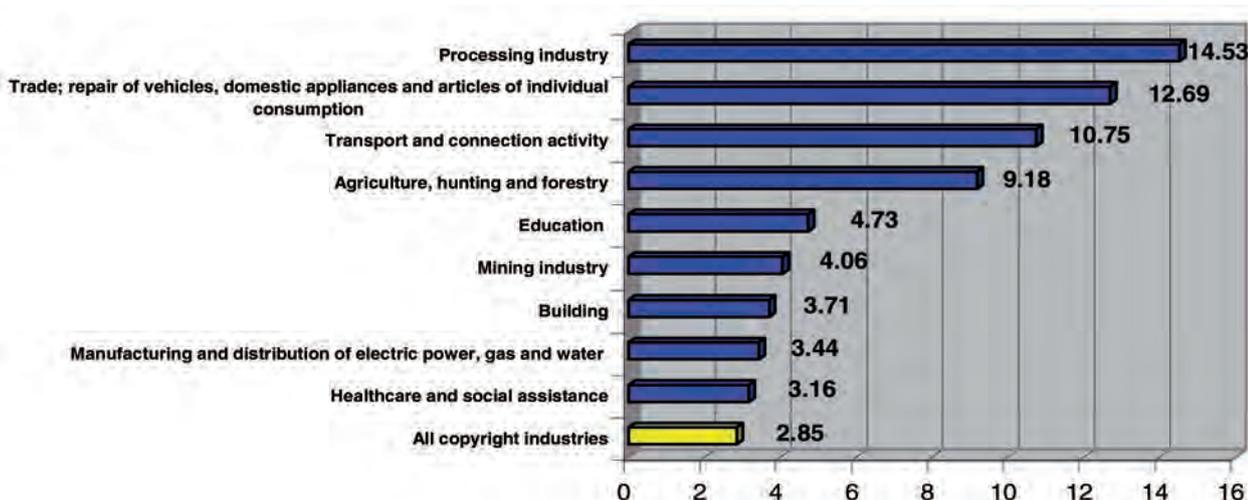
3.7. Comparison of the Copyright-Based Industries with Other Sectors of the Economy

The dominant share in GDP came from the following sectors: the processing industry (14.53 per cent), trade (12.69 per cent) and transport and related activities (10.75 per cent). CIs are not the leaders but play an important role in the economy of the country. Therefore, the above-mentioned industries which contribute 2.85 per cent to GDP, can be compared with such important sectors as building (3.71 per cent), manufacture and distribution of electric power, gas and water (3.44 per cent), healthcare and social assistance (3.14 per cent), which comprise 31 per cent of agriculture, hunting and forestry, 77 per cent of the building sector and 70 per cent of the mining sector.

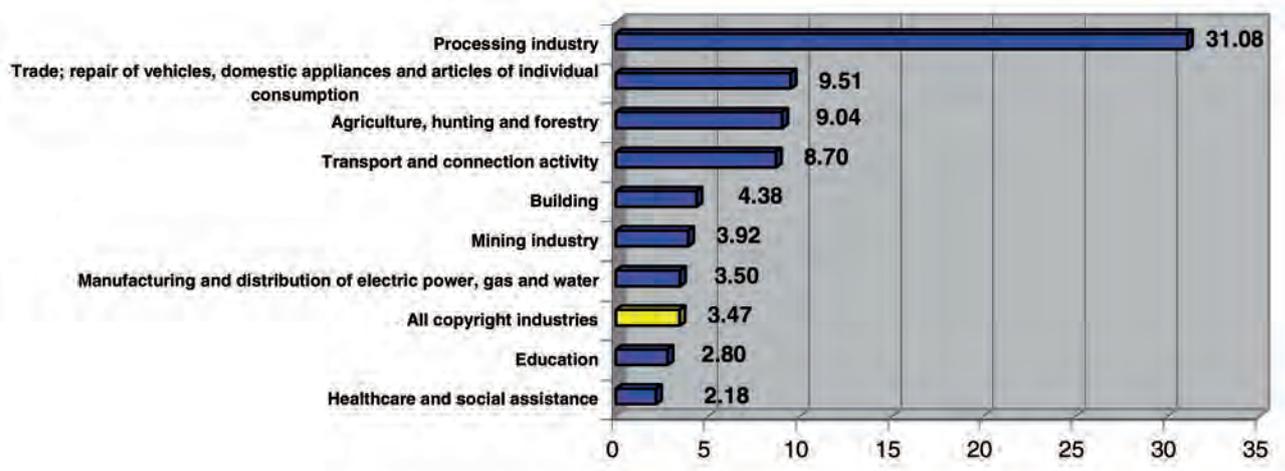
In comparing the CIs in terms of their contribution to gross production in Ukraine, it can be seen that these industries out-perform such important sectors as education (2.80 per cent) and healthcare and social assistance (3.14 per cent). Those industries almost equaled the manufacture and distribution of electric power, gas and water (3.50 per cent), and made up 40 per cent of the contribution of the transport and related activity sector; nearly 38 per cent of the contribution of the agriculture, hunting and forestry sector.

The employment contribution of the CIs amounted to 1.91 per cent of the total working population and comprised 360,412 persons. It exceeded the employment contribution of such an important sector as financial activity (1.2 per cent), and also equaled the figure of almost 28 per cent of those employed in the transport and related activity sector; just below 38 per cent of those employed in the state administrative sector or 42 per cent of those employed in the building sector.

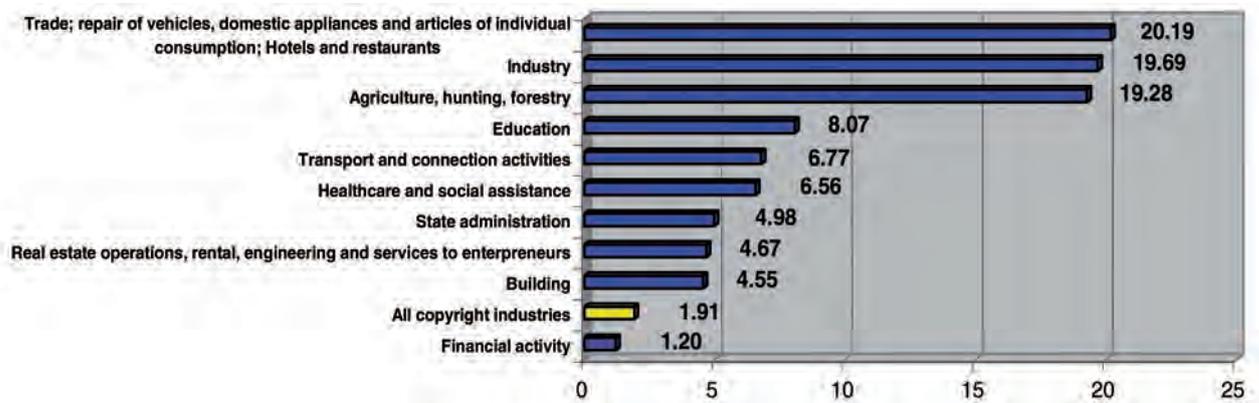
Contribution of the Copyright-Based Industries to GDP in Comparison with Other Sectors of the Ukrainian Economy in 2005 (%)



Contribution of the Copyright-Based Industries to Gross Production in Comparison with Other Sectors of the Ukrainian Economy in 2005 (%)

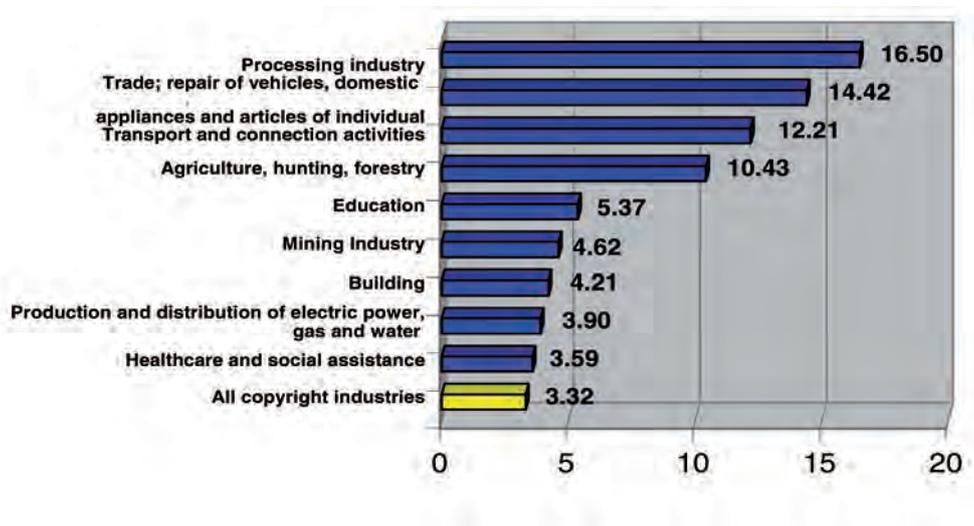


Contribution of the Copyright-Based Industries to Employment in Comparison with Other Sectors of the Ukrainian Economy in 2005 (%)





Contribution of the Copyright-Based Industries to GVA in Comparison with Other Sectors of the Ukrainian Economy (%)



3.8. International Comparisons

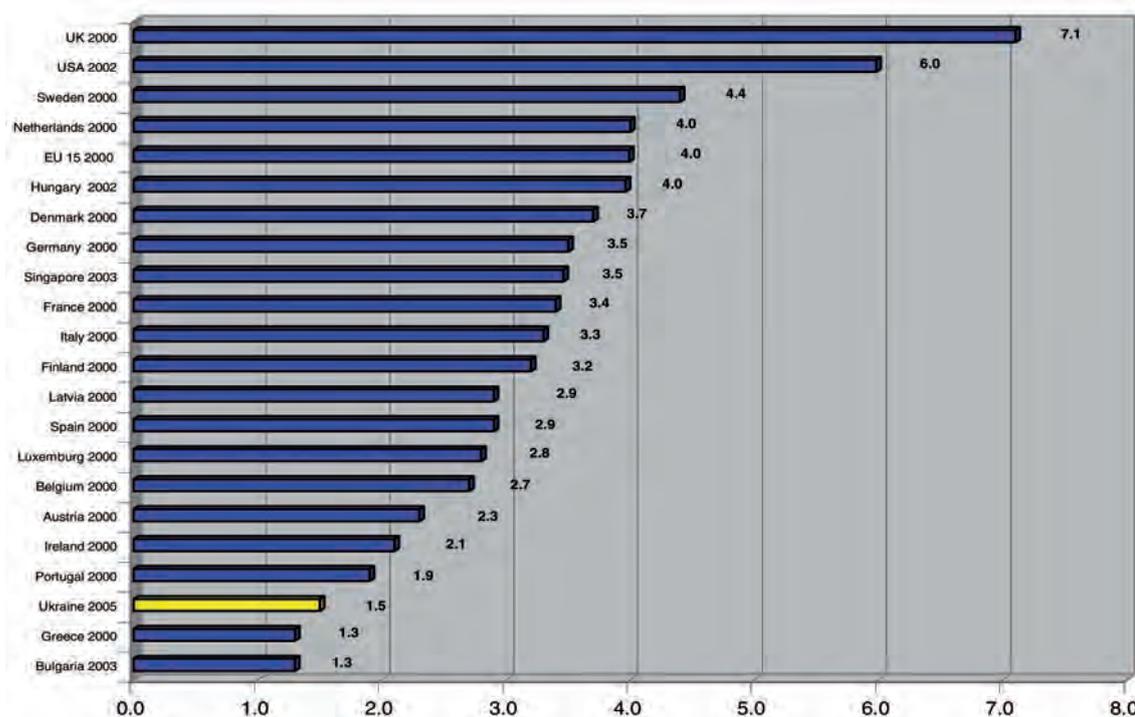
Comparison of the economic indicators of the CIs in Ukraine with the economic indicators of corresponding industries in other countries helps to understand that effective support for and development of these industries is an urgent necessity. The background for international comparisons is a number of studies conducted worldwide.²⁶ In view of certain divergences in relation to the methodologies of these studies, the international comparison of the economic indicators of certain countries is only possible at the level of the core industries.

Thus, considering the contribution of the core copyright industries to the GDP of various countries, we can see that Ukraine occupies the penultimate place.²⁷ The Ukrainian indicators for the core industries are five times lower than for the UK or 2.6 times lower than for Hungary. The contribution of the core copyright industries to Ukrainian GDP represented 0.375 of the Hungarian indicator.

²⁶ Robert G. Picard, Timo E. Toivonen, Mikko Grönlund, *The Contribution of Copyright and Related Rights to the European Economy Based on Data from the Year 2000, Final Report*, 20 October 2003; *The Economic Contribution of Copyright-Based Industries in Singapore: An Update* www.ipacademy.edu.sg/site/ipa_cws/resource/executive%20summaries/Exec_Sum_Economic_Upd.pf; Krisztina Penyigey, Peter Munkácsi, *The Economic Contribution of Copyright-Based Industries in Hungary*, The 2005 Report; Robert G. Picard, Timo E. Toivonen, *The Economic Contribution of Copyright-Based Industries in Latvia*, The 2000 Report; Stephen E. Siwek, *The Economic Contribution of Copyright-Based Industries in the USA*, The 2004 Report.

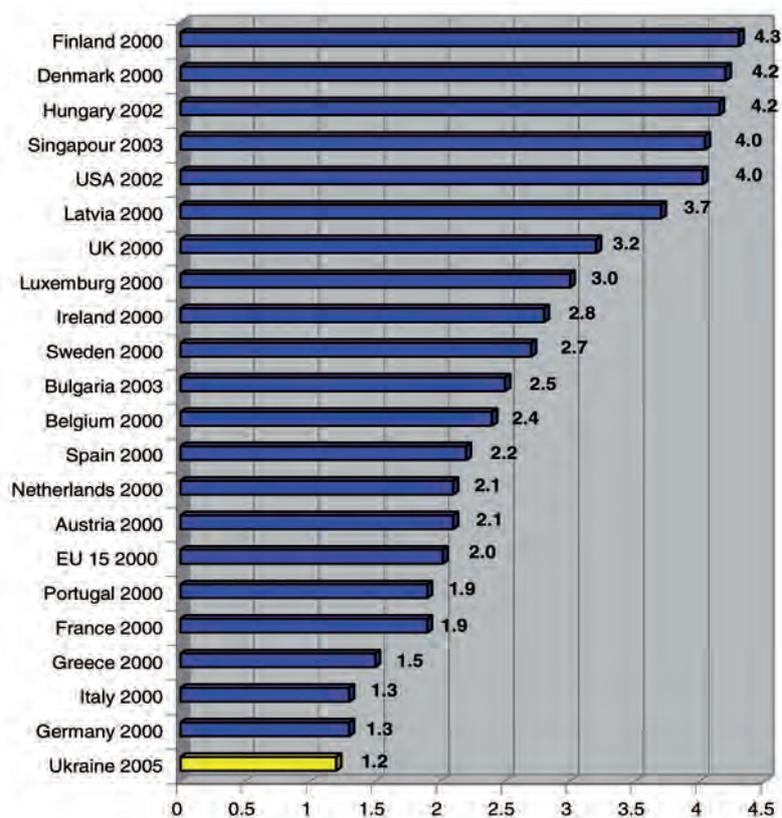
²⁷ It should be noted that the diagram represents the economic contribution of the core industries in Bulgaria in 2003 and in the US in 2002. The contribution of the industries in Bulgaria in 2005 and the US in 2005 will be considered further in this chapter.

Contribution of the Core industries to GDP in Various Countries (%)



Making international comparisons with reference to the numbers employed in the core copyright industries left Ukraine in last place, 3.5 times lower than the leader, Finland; twice as low as Bulgaria in 2003, and accounted for approximately 0.28 of the share of employment in the core copyright industries in Hungary.

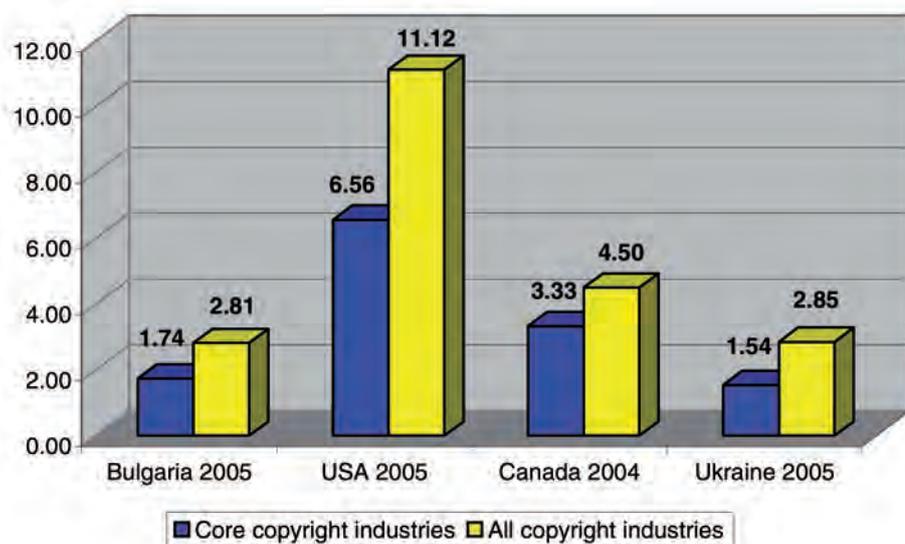
Contribution of the Core Industries to Employment in Various Countries (%)



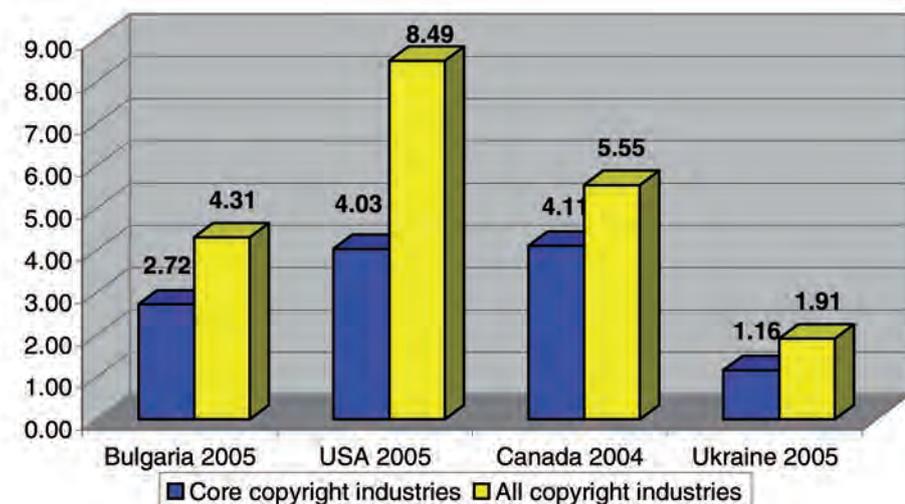
The studies conducted in some countries allowed for international comparisons including the aggregate economic contribution of all CIs as well as the contribution the industries made to employment,²⁸ particularly international comparisons based on information for the same year or related to the year of the study.

For example, from comparing the contributions of all CIs to GDP in Ukraine and the US in 2005, it may be concluded that the Ukrainian indicator was four times lower than the US indicator and 1.5 times lower than Canada. The contribution of the Bulgarian copyright and related rights industries to GDP was almost equal to that of Ukraine.

Contribution of the Copyright-Based Industries to GDP in Certain Countries (%)



Contribution of the Copyright-Based Industries to Employment in Certain Countries (%)



The share of employment in the CIs in Ukraine was twice as low as Bulgaria, approximately three times lower than Canada and 4.5 times lower than the US.

²⁸ Stephen E. Siwek, *Copyright Industries in the U.S. Economy*, The 2006 Report; CONNECTUS Consulting Inc., *The Economic Impact of Canadian Copyright Industries - Sectoral Analysis*, Final Report, 31 March 2006; Ivan Tchalakov, Vladya Borisova, Donka Keskinova, Georgi Damyanov, Rossitza Arkova, Tsveta Andreeva, Jordan Kalchev, Todor Todorov, *The Economic Contribution of Copyright-Based Industries in Bulgaria*, 2007.

Chapter 4. Basic Development Trends of Some Core Copyright-Based Industries

The aim of this chapter is to expand the possibilities of analyzing some core copyright-based industries by presenting certain statistical data as well as outlining the trends over a longer period of time.

4.1. Some Aspects of State Regulation

Financing of the Cultural Industries

The core copyright industries deal mainly with culture. Culture is a social product and is of considerable importance for forming public opinion and social development. Through its role as a public good, culture requires financing and assistance for its existence and development. In the days of the Soviet Union, it served chiefly as a means of consolidation of the ruling party's will to fashion the ideals of Soviet citizens. Thus, because of its political implications, official culture gained full financial support and was characterized by the way it was "planned" through setting minimal prices for services.

After the declaration of independence on August 24, 1991, Ukraine inherited the large and diverse base of cultural institutions from the USSR. Over the next few years (1993-98) of economic crisis the whole infrastructure of the cultural industries was striving to adapt to new economic realities and a low level of budget support.

From 2003, the economic situation in Ukraine gradually improved and expenditure on culture is now growing, although it has been affected by inflation. Added to this, increasing expenditure on culture has been lower than GDP and growth, making the percentage of expenditures almost static.

It should be noted that the majority of institutions, organizations and even cultural enterprises belonging to public and government entities have budget resources as their main source of income.

The analysis of trends in the development of the cultural industries should start from analysis of state budget expenditure on culture.

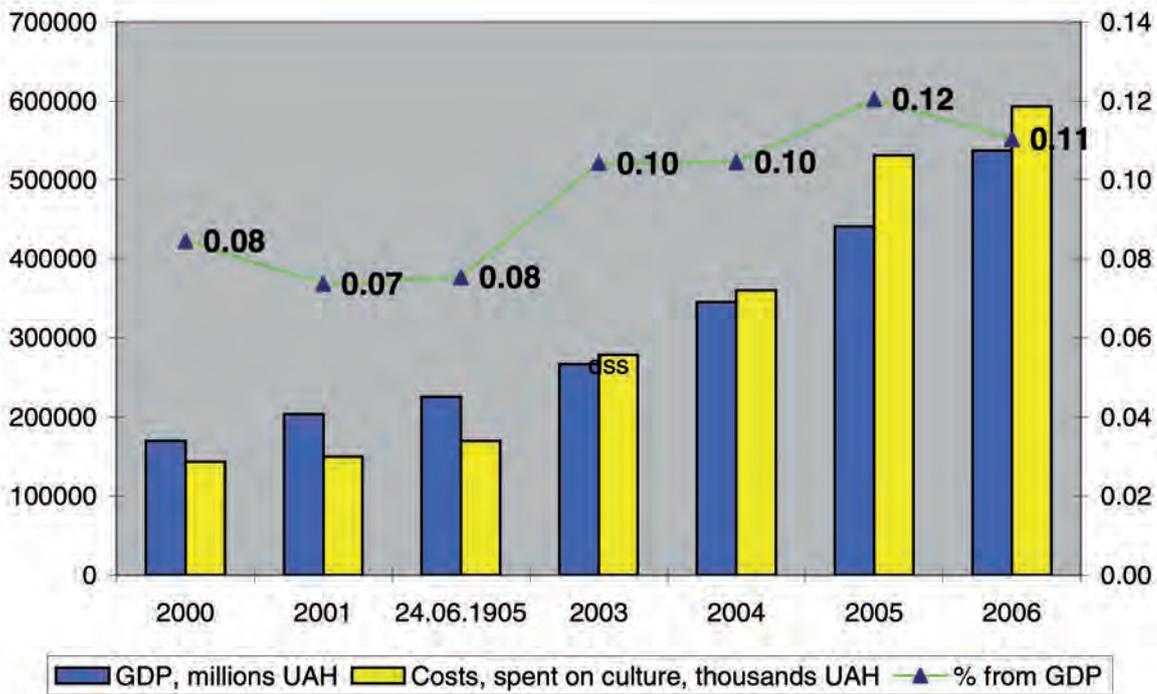
Actual State Expenditure on Culture and the Arts in 2001-2006 ('000'000 UAH)

Expenditure on culture and the arts	2001	2002	2003	2004	2005	2006
Actual state finance	150.43	170.1	278.6	360.55	549.2	593.5
Percentage of GDP	0.07	0.08	0.10	0.10	0.12	0.11

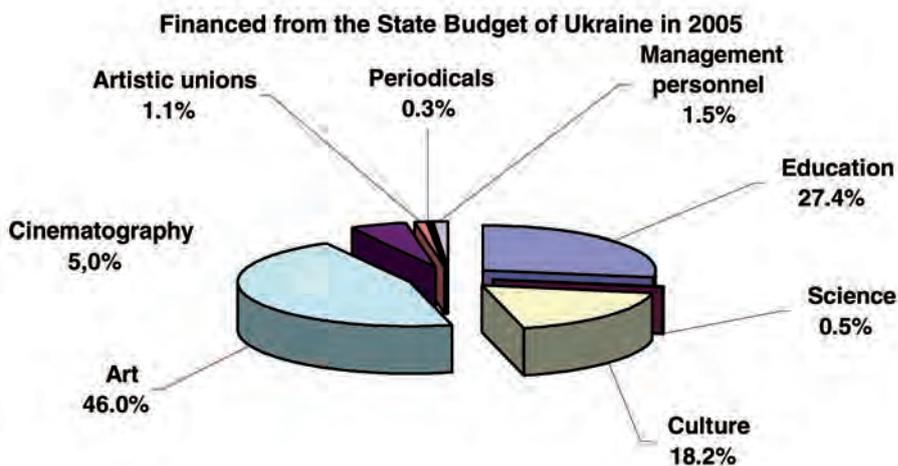
Expenditure on culture in the state budgets of 2001-2006 did not exceed 0.12 per cent of GDP. In 2004, expenditure on culture amounted to 28 UAH (5.5 US dollars) per head of the population. In comparison with 2000 it increased threefold and, in 2005, by more than 30 per cent, amounting to 43 UAH (8.5 US dollars).²⁹

²⁹ National report on cultural policy in Ukraine, http://www.mincult.gov.ua/nac_zvit_cult1.rar

State Expenditure on Culture and the Arts in 2001-2006



Financed from the State Budget of Ukraine in 2005



After detailed examination of the tables, it can be seen that within the period 2001-2006 the financing of culture in Ukraine increased almost fourfold. However, regarding the growth of financing in terms of GDP, the picture is less bright. This shifted from 0.07 per cent of GDP in 2001 to 0.12 per cent in 2005 and even reduced to 0.11 per cent in 2006. The most abundantly financed sphere related to artistic activities: in 2005 a total of 46 per cent of the budget for culture was invested in this sector.

In view of this priority in financing theater and the performing arts, museums, exhibitions, cultural memorials and libraries suffered greatly and today require enhanced attention from the state and society in general.

To conclude, it should be noted that state financing for culture and the arts in 2005 was of only 0.12 per cent, which is considerably lower than the contribution of the cultural industries to Ukrainian GDP (1.34 per cent) (*i.e.*, the core copyright industries except software and museums, which are included in the partial industries).

Enhanced financing for this sector is essential for its improvement and for raising its influence on the Ukrainian economy.

Problems of state regulation lie not only in insufficient financing but also in mechanisms of financial assistance. These mechanisms are characterized by opaque state financing priorities and an insufficient number of competitive financing mechanisms. We also considered that besides improving financing, the state system required a thorough overhaul, including the introduction of new and more flexible mechanisms directed at the promotion of cultural development and attraction of additional private funds. Other possible measures to resolve this issue could be by reviewing priorities in financing in several cultural domains, with the aim of creating an adequate and transparent system of state financing.

Distribution of Copyright and Related Rights Objects through Material Carriers

New technologies that allow for cheap reproduction of objects of copyright and related rights by means of various carriers have resulted in mass piracy in Ukraine. To combat this and to protect the interests of copyright and related rights and consumers' rights, a law on the distribution of copies of audiovisual works, phonograms, videos, software and databases was adopted. This law sets out regulations for the circulation of copies through its system of control marks. The control mark is a self-adhesive mark with holographic protection.

According to this law, the internal distribution and rental of copies of audiovisual works, phonograms, videos, software and databases is allowed only if they bear a label with "nominal" control marks. Introduction of the "nominal" control mark has facilitated the work of the control units and has given consumers an opportunity to see that they are purchasing a licensed product.

Analysis of the control marks issued in Ukraine reveals the volume of the legal market, as well as showing certain trends related to the use of various carriers for the distribution of copyright and related rights.

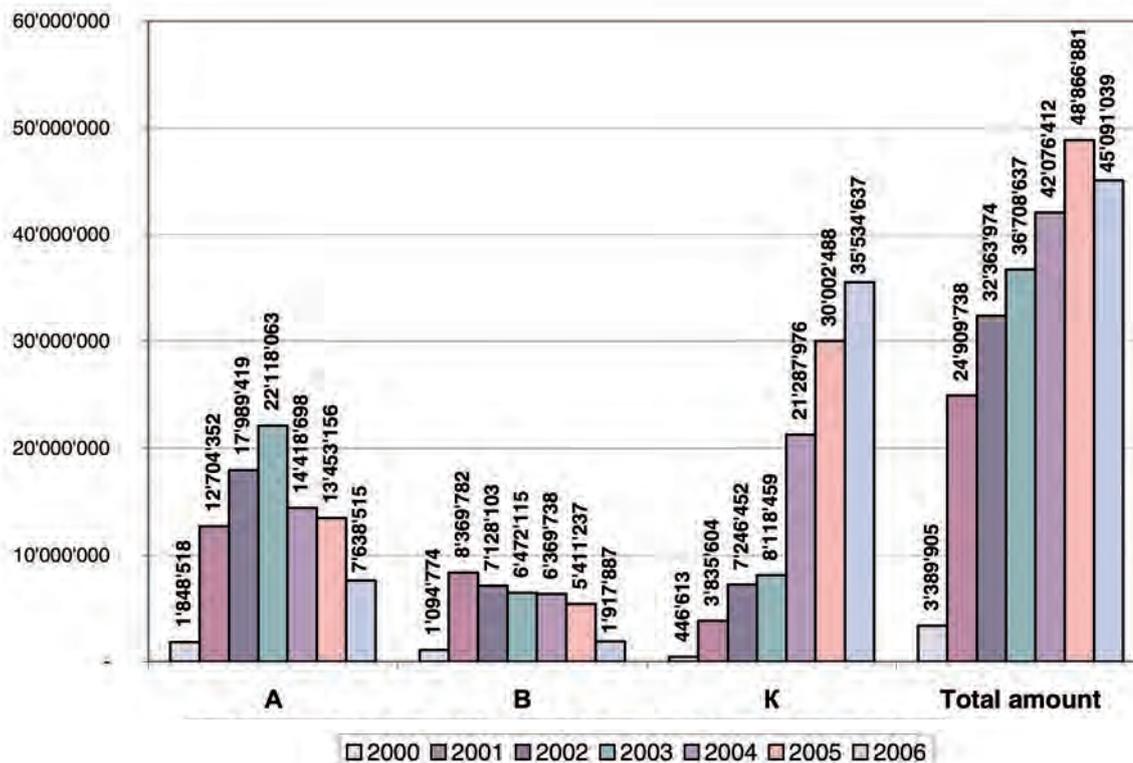
Processing the issue of control marks from 2000 to 2006, it can be deduced that this is closely related to technological development, namely development of digital data transmission technologies. For example, issue of the "A" series (audio cassettes) was gradually increasing up to 2003—at the beginning of 2000, 1,848,518 marks were issued; in 2001, 12,704,352 marks; in 2002, 17,989,419 marks. In 2003 the issue of the "A" series of marks was at its highest point and comprised 22,118,063 marks. From 2004, a decrease was observed: in 2004, 14,418,698 marks were issued; in 2005, 13,453,156 marks. In 2006 there was a sharp fall, to 7,638,515 marks.

The situation for the "B" series (video cassettes) is similar. At the launch of the system in 2000, only 1,094,774 marks were issued. There followed a rapid increase in the number of marks issued: in 2001, 8,369,782 marks, with a gradual decrease to 7,128,103 marks in 2002; 6,472,115 marks in 2003; 6,369,738 marks in 2004 and 5,411,237 marks in 2005. In 2006 the issue of control marks fell sharply to 1,917,887 marks.

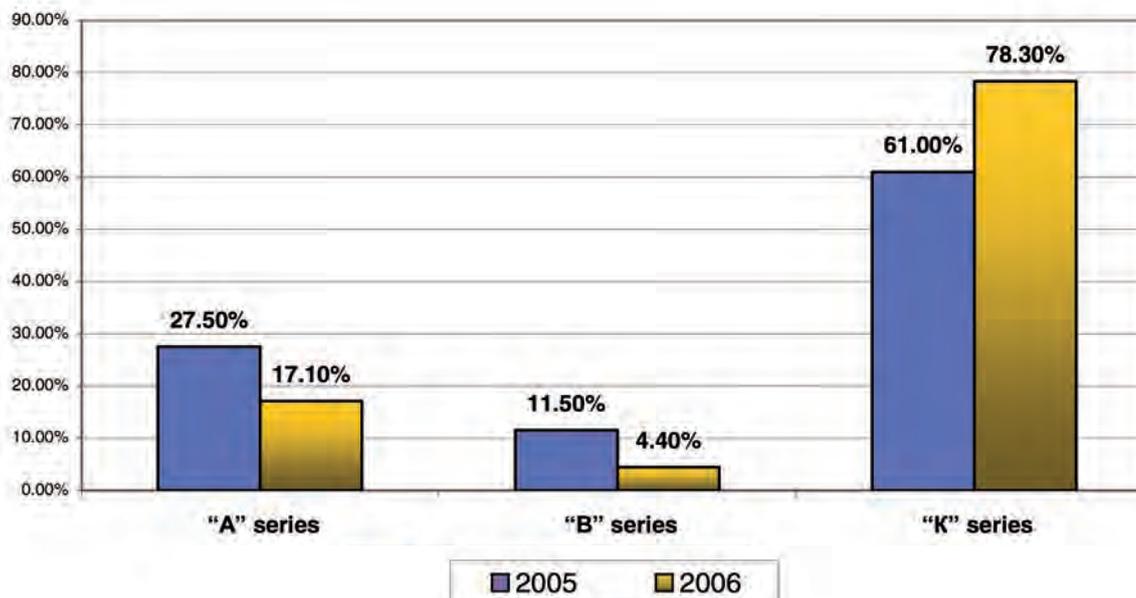
A positive trend in the issue of control marks was only seen in the "K" series (CDs). From a low level in 2000 to 2003, it took the lead in 2004 and progressively became the most issued series. Thus, in 2000, 446,613 control marks were issued; 3,835,604 marks in 2001; 7,246,452 marks in 2002; 8,118,459 marks in 2003; 21,287,976 marks in 2004; 30,002,488 marks in 2005; 35,534,637 marks in 2006.

Summarizing these tendencies, it is possible to conclude that analog carriers such as audio and video cassettes are being abandoned by consumers and priority given to digital carriers. The year 2005 was the high point in popularity of both analog and digital carriers. The rapid decrease in issuing the control marks for analog carriers in 2006 testifies to the preference for digital carriers. The high quality and effective life of such carriers, for example DVDs, which store five times more information, explains the general decrease in the number of control marks issued.

Number of Control Marks Issued in 2000-2006



Percentage of Control Marks Issued in 2005-2006

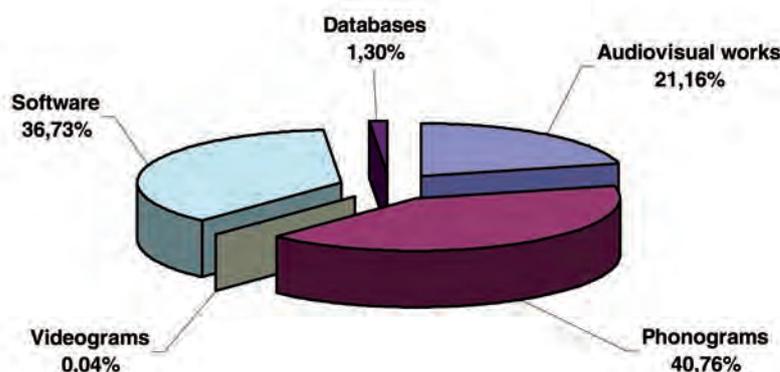


The data in these tables shows the growth of the share of licensed audio and video production, software and databases in the Ukrainian market.

Analysis of the Issue of "K" Series Marks (CDs)

The division of control marks into three categories in accordance with the type of carrier ("A" – audio cassettes, "B" – video cassettes, "K" – CDs) raises a few questions. If categories "A" and "B" involve audio and video cassettes, there is no doubt as to the contents of these carriers. However, the latest tendencies confirm the growing role and popularity of CDs for laser-readable systems. The use of CDs accounted for nearly 50 per cent of all control marks issued in 2005, comprising 50.6 per cent, whereas in 2006 the figure was 61 per cent and in 2006 it was 78.30 per cent. Since various objects of copyright and related rights are distributed on CDs for laser-readable systems, it was decided to define the number of "K" control marks issued in 2005, according to the following categories: audiovisual works, phonograms, videos, software and databases. Processing more than 7,200 applications for the issue of control marks gave us the opportunity to divide code 8524000000 relating to records, films and other carriers for sound or similar recording, including matrices and forms for production of records while calculating foreign trade with commodities related to the core copyright industry. The results of the study demonstrated that the highest number of control marks (12,229,932) concerned phonograms, comprising 40.76 per cent of the total. This sector is followed by computer programs (11,020,571) or 36.73 per cent; audiovisual works (6,349,328) or 21.16 per cent; databases (391,257) or 1.31 per cent and videos (11,400) or 0.04 per cent. In 2005, the total number of control marks issued in category "K" was 30,002,488 or 61 per cent of the total.

Share of Control Marks Issued in the "K" Series in 2005



4.2. Press and Literature

Book Publishing

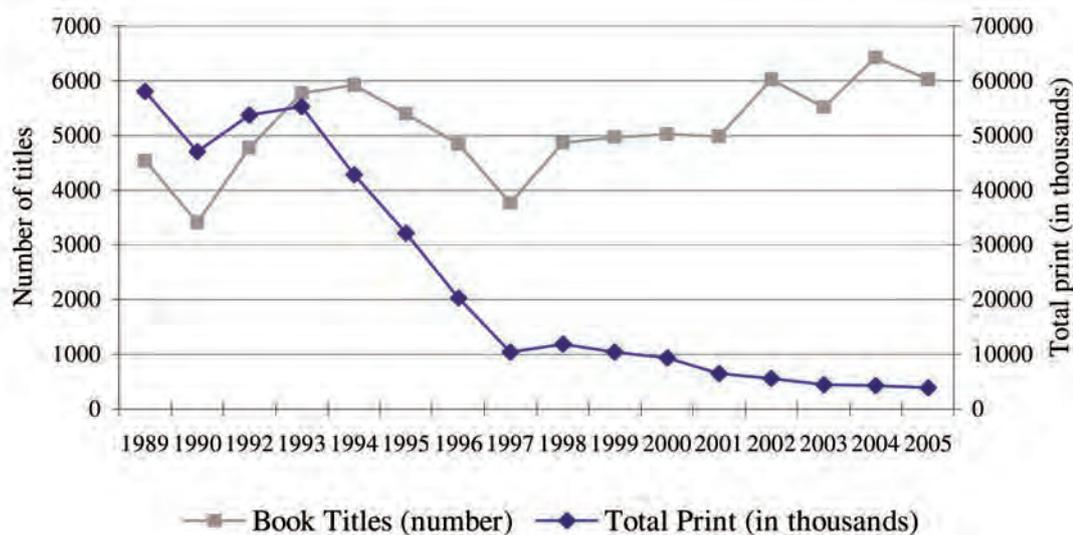
The trends shown in the book market are similar to those outlined by other countries of the region which were included in an additional chapter in the *Study on the Economic Contribution of Copyright-Based Industries* (Bulgaria, Hungary). However, the Ukrainian book market has certain distinctive features.

At the beginning of the 1990s one could issue large numbers of editions with a relatively small number of titles. Later, the number of titles grew while volume output was falling. The crisis in the publishing business corresponded to the general economic decline from 1991 to 1999.

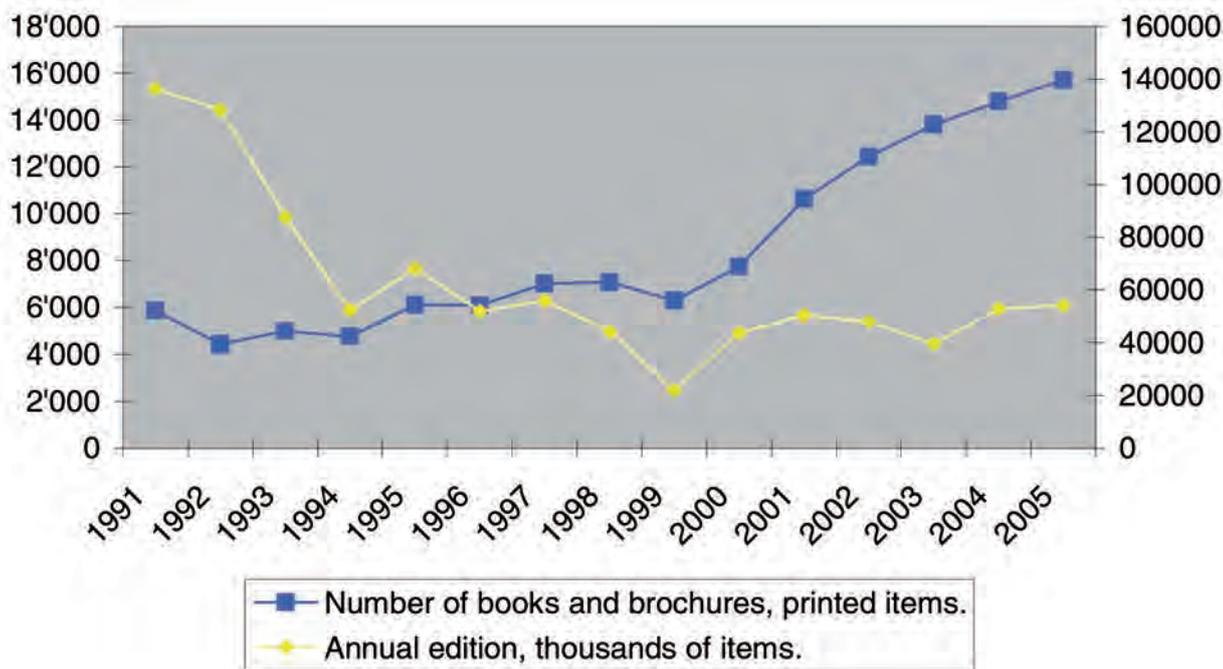
Development of the Book Market in Terms of the Volume of Books and Brochures for the Period 1989-2005 (Bulgaria)



Development of the Book Market in Terms of the Volume of Books and Brochures for the Period 1989-2005 (Bulgaria)³⁰



Development of the Book Market Including in Terms of the Volume of Books and Brochures for the Period 1991 to 2005



The above tables show that the general trend concerning the book market in Bulgaria and Ukraine is similar. Detailed examination may throw up certain differences year-by-year. Thus, for example, the rapid decline in Ukraine took place throughout the period 1992 to 1994. In 1995, a further gradual decline in volume of editions occurred, going up to 1999, which was marked by the slow growth in volume and the rapid increase in the number and variety of titles. A similar decline took place in Bulgaria over the period 1993 to 1997, after which the market stabilized. Although, the decline in volume continued up to 2005, the overall increase in the number and variety of titles was perceptible.

³⁰ Ivan Tchalakov, Vladya Borisova, Donka Keskinova, Georgi Damyanov, Rossitza Arkova, Tsveta Andreeva, Jordan Kalchev, Todor Todorov, *The Economic Contribution of Copyright-Based Industries in Bulgaria*, 2007.

In Ukraine, the trend can be explained by several events in the development of the book market:

- Transformation-crisis period (1990 to 1995); total decline, caused by the transformation of the state publishing industry and the general economic crisis in the country.
- Period of depression (1996 to 1999); period of dramatic change, caused by attempts to establish protectionism allied with the financial crisis of 1998.
- Stabilization period (1999 to 2002); gradual stabilization in the industry, characterized by the growth of choice in the national book supply. The private sector had already become dominant during that period.
- Period of stable development (2003 to 2006); slow but stable growth in publishing, stimulated by development of the Ukrainian economy as well as by the introduction of tax rebates in the publishing industry.

Development of the Ukrainian Book Market in the Period 1991-2005

Year of edition	Number of books, brochures, printed items	Annual edition, ('000s)	Average edition of one publication, ('000s)	Number of books, brochures, per head
1991	5,855	136,415.90	23.3	2.6
1992	4,410	128,470.70	29.1	2.5
1993	5,002	87,567.00	17.6	1.7
1994	4,752	52,161.00	10.9	1
1995	6,109	68,156.00	11.2	1.3
1996	6,074	51,777.10	8.5	1
1997	7,004	55,841.30	7.9	1.1
1998	7,065	44,150.00	6.2	0.9
1999	6,282	21,985.60	3.5	0.4
2000	7,749	43,562.90	5.6	0.9
2001	10,614	50,324.50	4.7	1
2002	12,444	47,862.90	3.8	1
2003	13,805	39,462.90	2.9	0.8
2004	14,790	52,804.70	3.6	1.1
2005	15,720	54,059.80	3.4	1.5

Statistical collection "Print of Ukraine", the State Committee of Television and Broadcasting of Ukraine, Book Chamber of Ukraine after I. Fedoriv.

Thus, in 2005, the book market showed a stable development trend and was characterized by the slow increase in volume and the rapid increase in variety. Comparing the years 2005 and 1999, an increase in volume (240.2 per cent) and the number of book titles (235.4 per cent) can be seen. However, in comparing 2005 with 1991, volume comprised only 38.7 per cent and the number of book titles, 252.6 per cent.

With the aim of stimulating the book market, the *Verkhovna Rada* (Parliament) of Ukraine adopted the Law of Ukraine on State Support of the Publishing Industry. This Law offered the following benefits:

- Imported materials released from duty from January 1, 2004, to January 1, 2008 were paper, cardboard, cellulose as a production material, other printing materials, equipment, computers and other hardware, spare parts, expendables, which were produced abroad and imported for use in publishing.
- Import duties on the articles listed above were temporarily relaxed until January 1, 2008.
- The following activities were temporarily exempted from taxation until January 1, 2008: implementation of works and service provision in publishing, production activities and distribution by publishing

houses, publishing organizations and printers, as well as activities related to the sale of the books produced and paper and cardboard, which was manufactured in Ukraine for book production.

- The income of the publishing houses, publishing organizations and polygraphy enterprises, received from publishing as well as activities related to production and distribution.

Taking into account the statistics for 2004 to 2005, the effect of the Law of Ukraine on the State Support of the Publishing Industry appeared to be positive. Moreover, a strong impetus towards development of the Ukrainian publishing industry was given through the growth of spending on books for libraries, educational institutions, etc.

Slow rates in development of the book market can be explained by the dominant position in the market of imports from Russia.

Editions of Specialist Books and Brochures by Category in 2005

	Total	Scientific publications	Popular science publications for adults	Normative and production-practical publications	Official publications	Educational and methodical publications
Number of printed items	15,720	2,501	1,046	905	908	5684
Percentage	100	15.9	6.7	5.8	5.8	36.2
Edition ('000 items)	54,059.8	1,633.5	3,280.4	2,132.9	898.6	26,542.8
%	100	3.0	6.1	3.9	1.7	49.1
	Literary-artistic publications for adults	Publications for children and teenagers	Reference literature	Publications for leisure organization	Religious literature	Public and political literature
Number of printed items	2,273	787	920	123	311	77
Percentage	14.5	5.0	5.9	0.8	2.0	0.5
Edition ('000 items)	5,438.6	4,192.5	4,820.8	1,283.1	930.9	2,741
Percentage	10.1	7.8	1.7	2.4	1.7	5.1

Statistical collection "Print of Ukraine" the State Committee of Television and Broadcasting of Ukraine, Book Chamber of Ukraine after I. Fedoriv.

Regarding the specialized market for books and brochures in Ukraine in 2005, it can be seen that educational publications, namely text books and manuals, predominated with 49.1 per cent of the market. Because the main customers for this type of literature are state-financed educational institutions, we can conclude that the Ukrainian publishing industry is highly dependent on the state and state financing. On the other hand, literary-artistic publications for adults comprised only 10.1 per cent of the total volume and 14.5 per cent of all titles. This offers confirmation that the majority of arts literature is imported.

One of the major problems of the Ukrainian book industry is the number of pirate editions; including illegal extra editions, which are unlawfully imported and distributed through the retail sales network and other specialized outlets.

A possible solution to this problem is the stimulation of production in specialized legal trade centers, having access to all the necessary documentation related to the origin of goods.

Summarizing the state of the Ukrainian book market, it seemed that the industry's main problems are as follows:

- High dependence on state-financing of educational textbooks and manuals;
- Important volume of imported literature
- Insufficient state support
- Absence of a nationwide development concept for publishing
- High levels of pirated and contraband products on the market

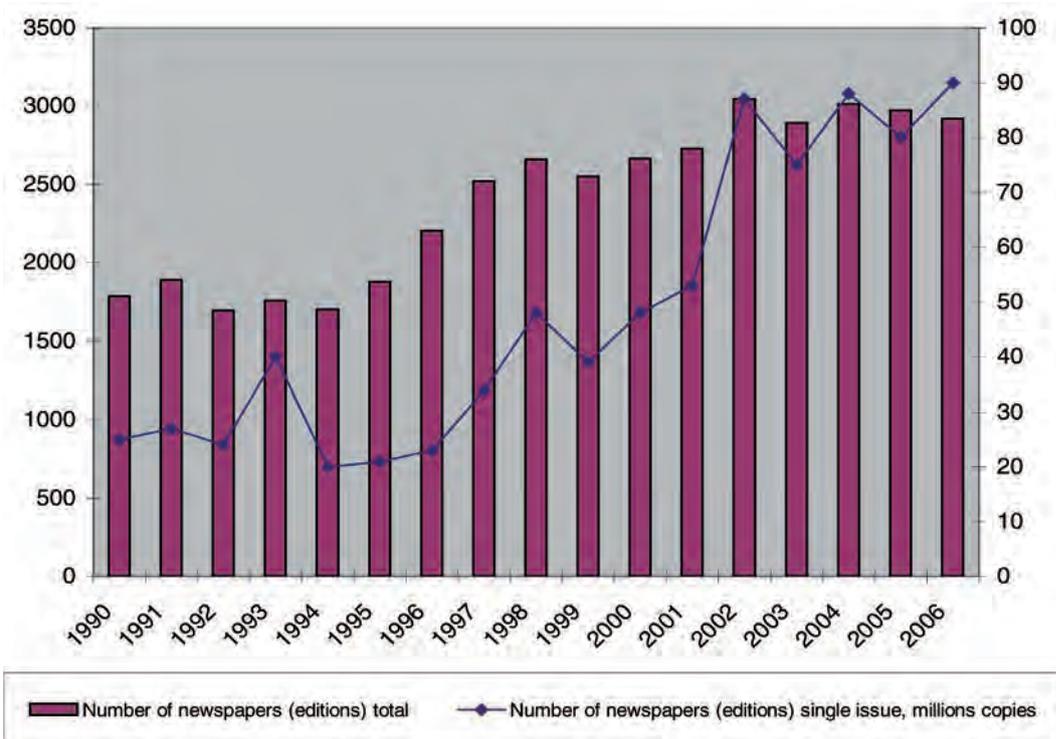
Therefore, in order to support the positive trends seen in 2004 and 2005 towards an increase in national publishing, a protectionist policy for the national publishing houses must be supported, and development and popularization of Ukrainian works of art must be stimulated. For them to break free of their dependence on state financing, a nationwide publishing development concept should be developed. An effective fight against piracy and illegal imports and distribution of books in Ukraine should also be supported.

Press

For the last few years, the newspaper and magazine market has been growing steadily. However, at the beginning of the 1990s and the 21st century, the trends in these two markets showed some divergence. In spite of economic difficulties and social reforms, the newspaper market preserved its stability. The number of newspapers within the period 1992 to 1995 decreased from 1,891 in 1991 to 1,695 in 1992. However, in 1995, there were 1,887 titles and that year marked the beginning of stable growth.

The situation for volumes of one-off editions is more likely to fluctuate. Taking into account the role of newspapers as an important source of information, news and analytical materials, it may be assumed that the fluctuation in issues is influenced by developments in the social and political climate in Ukraine.

The Newspaper Market (1990-2006)



The table below shows the influence of Ukrainian elections on newspaper sales. Therefore, an increase in volumes was linked to the parliamentary elections in 1994 and the presidential elections (June 26 and July 10, 1994), with the main period of public discussion taking place in 1993. The same trends appeared in 1998, with parliamentary and presidential elections in 1998 and 1999. These events contributed to an increase in sales. Market analyses for periodicals should not connect their development trends exclusively to socio-political events, though some general trends are evident.

Ukrainian Elections

Parliamentary elections in Ukraine		1994	1998	2002	2006	2007
Presidential elections in Ukraine	1991	1994	1999	2004		

Number of Newspapers (Editions)

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Total	1,787	1,891	1,695	1,757	1,705	1,877	2,206	2,520	2,659	2,551	2,667	2,727	3,047	2,891	3,014	2,974	2,918
Single issue in '000'000s	25	27	24	40	20	21	23	34	48	39	48	53	87	75	88	80	90

Magazines and other periodicals issued by the State Statistics Committee of Ukraine, <http://www.ukrstat.gov.ua>.

It should also be noted, that since 1991 newspapers have adapted to the new social and economic conditions. This was clear at the beginning of the 1990s by the appearance of new low-quality tabloids, which satisfied a demand previously absent in the Soviet Union. These tabloids later partially disappeared because of the high level of competition and low demand, with only a few surviving. The newspaper market was also developing, trying to attract customers through the production of better quality, full-color editions with greater specialization and a higher price. Some newspapers (e.g., for the business community) later turned into magazines and some became free-of-charge (e.g., 15 *Hvyllyn*).

One of the current trends in the newspaper industry is the creation of websites with on-line publication of newspapers.

In general it should be emphasized that the number of newspaper titles has increased 1.5 times since 1991 and the single volume edition has increased 3.3 times. This is a very positive trend for the industry, although introduction of new digital technologies and the Internet take public attention away from printed media. Newspapers do, however, play an important role and this is evident from the following statistics.

Changes in Leisure Practices in 1994-2004 (Data from Sociological Surveys)

Type of activity	1994	1996	1998	2000	2002	2004
Newspaper reading	53.6	56.2	61.9	70.3	61.2	58.3

V.Vorona, M.Shulga (edit.), *Ukrainian Society 1994–2004. Monitoring of Social Change*, Kyiv: Sociology Institute, 2004, p.639. <http://www.ukrstat.gov.ua>.

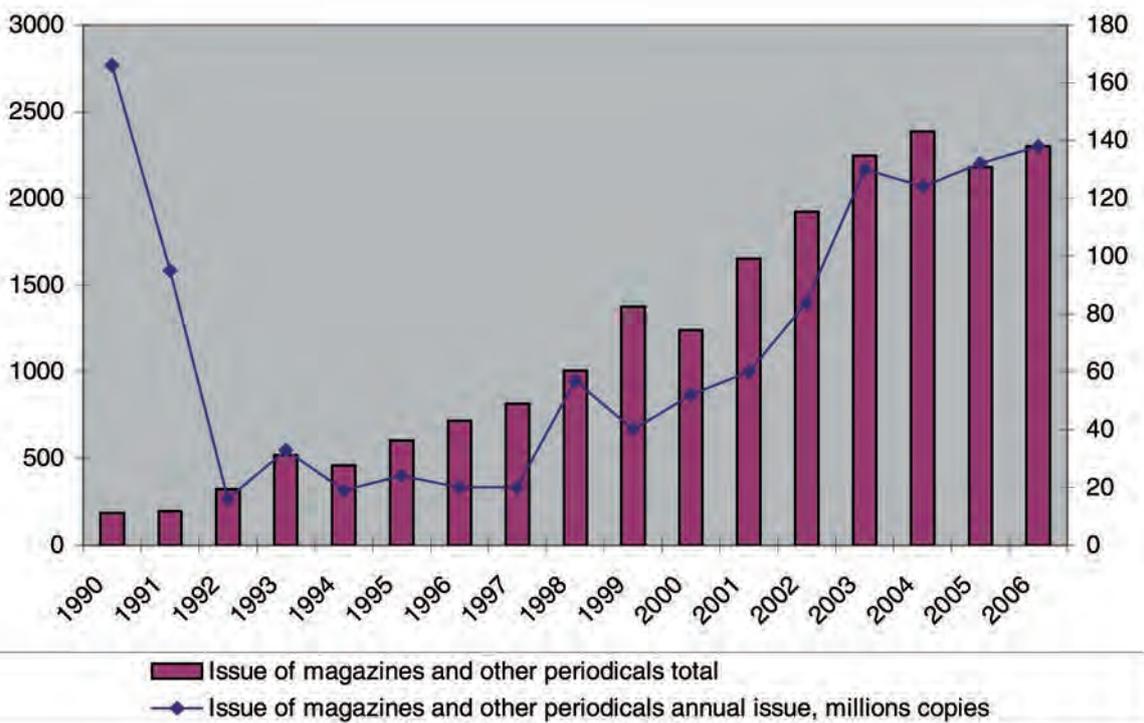
Market trends for the development of magazines and other periodicals are somewhat different from newspapers. Magazines were very popular in the era of the Soviet Union. That is why, in 1990, distribution accounted for 166 million copies. Economic problems in the 1990s had a very negative impact on this industry, which resulted in shortage of the yearly issues 10.3 times in 1992. The number of magazines issued comprised 16 million copies in 1992, irrespective of the efforts of the industry to adapt to the new conditions by means of diversifying the number of editions and increasing titles 1.7 fold.

Issue of Magazines and Other Periodicals (1990-2006)

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Total	185	194	321	522	461	604	717	817	1,009	1,374	1,242	1,653	1,923	2,246	2,385	2,182	2,301
'000'000 copies.	166	95	16	33	19	24	20	20	57	40	52	60	84	130	124	132	138

State Statistics Committee of Ukraine (<http://www.ukrstat.gov.ua>)

Issue of Magazines and Other Periodicals (1990-2006)



State Statistics Committee of Ukraine (<http://www.ukrstat.gov.ua>)

An analysis of the issue of magazines and periodicals in 1990–2006 shows the rapid decrease in annual volume. This decrease was caused by many factors such as high price, change in social priorities, distribution of magazines through subscription only, etc.

The industry therefore lost a section of its readership to the newspaper industry as a result of difficult economic conditions.

However, after improvement in the economic situation in Ukraine, the demand for high-quality magazines and periodicals has been recovering, showing a positive trend for development of the industry. The market is characterized by a striking variety of editions. In comparison with 1990, the number of titles has increased

12.4 times, with the annual volume reaching 83.1 per cent. From 1991, a gradual increase in annual figures can be seen. In 2006 this represented 138,000,000 copies, which is 8.3 times higher than in 1992.

Transformation of the industry resulted in permanent efforts being made by every journal to find its own niche and attract a certain readership. For example, after the formation and consolidation of an entrepreneurial class, such magazines as the *All-Ukrainian Economic Magazine Companion*, *Expert*, *Dengy* (money) etc. started conquering the market. The growth of a computer-literate population resulted in the setting-up of the magazine *Internet.ua*.

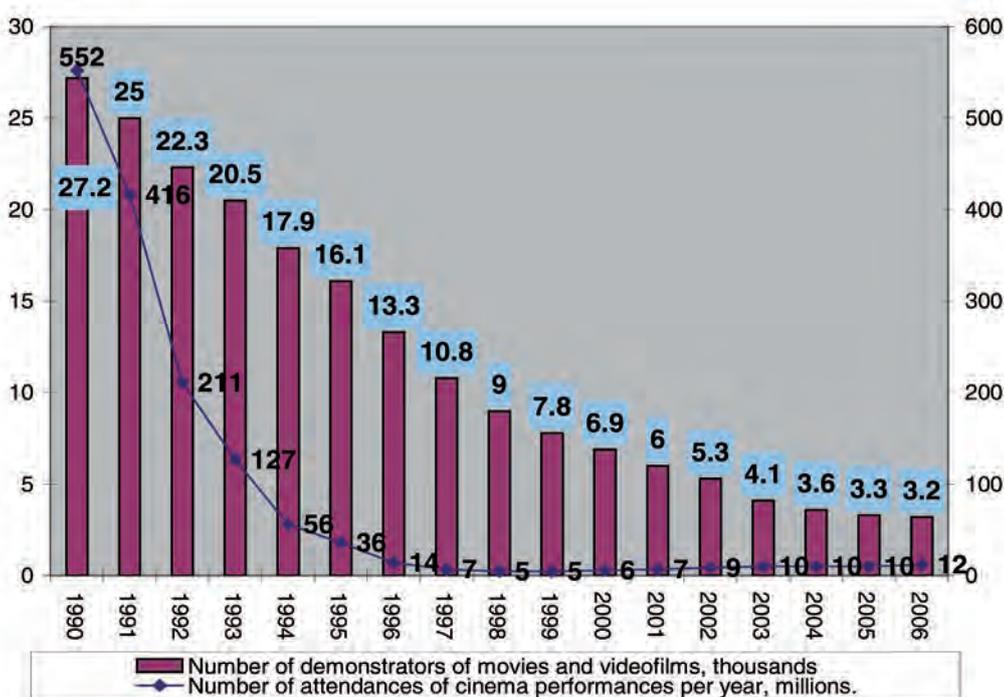
For three consecutive years, the highest media budgets were found in the women’s sector. This was followed by the financial and automobile press.³¹

4.3. Motion Picture and Video

Ukrainian cinema has a rich history and a long tradition but unfortunately it can hardly be said to have flourished: it faced many difficulties because of political repression and aesthetic censorship in the days of the Soviet Union.

The severe economic situation in Ukraine in the 1990s had an effect on Ukrainian cinema. If we consider the data in the table below, a downward trend in the number of screenings of, and attendances at, cinema performances may be observed. The majority of cinemas only existed in the 1990s through renting premises; the village cinema network shrank significantly and is still shrinking. Material and technical resources became outdated and are far behind global technological levels.

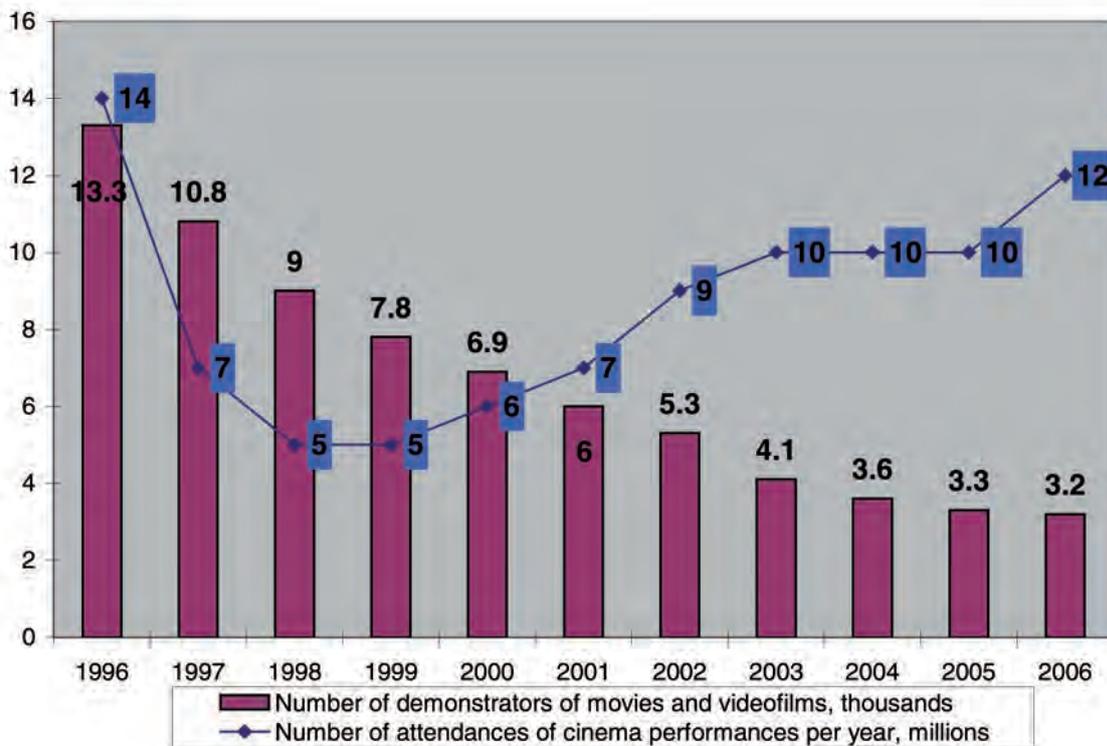
Number of Screenings and Attendances at Cinema Performances in 1990-2006



State Committee of Ukraine on Statistics <http://www.ukrstat.gov.ua>

³¹ Survey of the media market in Ukraine: main problems and development tendencies http://prcenter.org.ua/news_show.php?zap=1388.

Number of Screenings and Attendances at Cinema Performances in 1996-2006



If we consider the above tables there has been a clear upward trend in the number of attendances at cinema performances since 2000, while the number of screenings has been shrinking.

At present, 3,550,000 film projectors operate in Ukraine; although there are only 200 modern, renovated cinemas, distributed between 20-30 large cities. Almost 20,000 film projectors operated in Ukraine 15 years ago as well as around 800 municipal cinemas.

Six state film studios operate in Ukraine: the Oleksander Dovzhenko National Film Studio of Feature Films: a closed joint-stock company *Odesskaya* Feature Film Studio; the National Cinematic of Ukraine; the Ukrainian Film Studio of Animated Films; the Ukrainian Studio of Chronicle and Documentary Films; the Oleksander Dovzhenko National Center, with about 15 private studios also operating.³²

In the 1990s national film production amounted to several full-length feature films and 20-30 documentaries, cartoons and short films (*i.e.*, 10-15 per cent down from the level at the end of the 1980s).

Foreign films, mainly those produced in the US, take the highest share of the Ukrainian market for audiovisual products. The number of films produced in the Russian Federation is now constantly increasing. The percentage of foreign films, for which distribution certificates were granted by the Ministry of Culture and Tourism, was 85 per cent in 2006 (16,922 films out of a total of 19,902) but the actual number of foreign audiovisual works distributed in Ukraine was higher.

To obtain state support for the national film industry, various measures have been taken to stimulate development. One of these was the introduction of a 30 per cent minimum for broadcasting Ukrainian films, although this requirement is not being fulfilled because of the lack of films produced in Ukraine.

³² State cinematography service <http://dergkino.gov.ua>.

The adoption of the Law of Ukraine on the All-Ukrainian Program of the Development of the National Film Industry by the *Verkhovna Rada* of Ukraine in December 2002 was another effort directed towards developing the film industry in Ukraine.

It provided for the following:

- ensuring state support for the cinema according to Ukraine's international obligations;
- setting-up a modern national film industry; developing a system for film production;
- providing state support for management, regardless of the type of ownership;
- renewal of material and technical resources;
- development and implementation of regional programs on the improvement of services;
- improvement of a tax system for management, distribution and screening.

However, up to now tax benefits have not been introduced and the program itself has not been properly funded by the State.

State Funding of the National Film Production Industry in 1996-2006³³

Year	Financing of the film industry (projected, '000 UAH)	Financing of the film industry (actual, '000 UAH)	Actual funding (%)	Full-length films produced
1996	3,500.0	2375.0	67.8	4
1997	5,500.0	2488.6	45.2	6
1998	4,995.0	1360.0	27.2	2
1999	13,000.0	1872.9	14.4	6
2000	16,500.0	15762.0	95.5	1
2001	20,000.0	13194.5	66.0	6
2002	22,568.0	7823.8	34.67	10
2003	18,807.2	17997.7	95.7	1
2004	19,500	11,641	59.7	5
2005	33,054	26,454	80.0	30
2006	49,250	20,396	41.4	35

An increase in financing for the film industry is not the only way of solving problems. Thus, in 2005, state funding was of 80 per cent of the projected budget figure. In 2006, funding was increased to almost 49 per cent but in fact only 26.5 million UAH or 41.4 per cent of this amount was spent due to deficiencies in the state ordering and funding systems. Therefore, despite an increase in finance, funding mechanisms in the industry have not improved.

There are also other problems: lack of training for young and talented personnel to shoot audiovisual works; lack of script writers, technical personnel and talented actors; low levels of professional training.

The high volume of pirated products on the market poses another serious problem for the industry. Only 11,760,565 video cassettes and laser-reading discs were legally distributed, constituting only 0.25 per cent of the annual outlay on an audiovisual work per head.

This is why it is necessary to draw up a more diversified state policy, directed not only to increasing financing but also for training personnel, the introduction of tax benefits for companies producing audiovisual products, the introduction of a benefits regime for equipment and materials imported to and exported from Ukraine, regulation of issues of sponsorship for the national industry.

It would also be useful to have recourse to new information technology to develop the industry. In order to popularize Ukrainian cinema, to promote the education of a new generation of creators and to increase familiarity with the history of the industry, storage of archive material in digital format and facilitating public access are measures that we recommend.³⁴

4.4. Radio and Television

Television³⁵

The radio and television and broadcasting market has significantly developed since independence. At present the state, as well as private companies, operate in this market. Thus, 24 regional state television and radio broadcasting companies, the state-sponsored company "Crimea" as well as regional radio and television broadcasting companies in Kyiv and Sevastopol operate within the State Committee of Ukraine on Television and Radio Broadcasting. The Ukrainian Studio of Television Films (*Ukrtelefilm*), the State Television and Radio Broadcasting Company (Culture), the State Television and Radio Broadcasting Company, the Worldwide Service, the Ukrainian Television and Radio Broadcasting, the State Municipal Television and Radio Broadcasting Company (*Siverska*) (the city of Novgorod-Siverskiy (*chernigivska oblast*)) and the Municipal State Association on Television and Broadcasting of the City of Kriviy Rig operate under state management. At the same time the share of the private sector exceeded 96 per cent and only 4 per cent was attributable to the state broadcasting organization.³⁶

According to the Report of the National Council of Ukraine on Television and Radio Broadcasting for 2006,³⁷ there were 217 television channels operated by State television and radio broadcasting companies and 38 on-air radio networks of the regional television and radio broadcasting organizations operating in Ukraine. The State Register of Television and Radio Broadcasting Companies of Ukraine included 1,268 television and radio broadcasting organizations; of these 647 were telecasting companies, 524 radio broadcasting companies and 97 television and radio broadcasting companies.³⁸

³³ National report on cultural policy in Ukraine, http://www.mincult.gov.ua/nac_zvit_cult1.rar

³⁴ 59,938 documents on the cinema industry covering the period 1896 to 1996 are contained in the Central State Pshenychny CinePhotoPhono Archive of Ukraine. <http://www.archives.gov.ua/Archives/index.php?ca05#DB>.

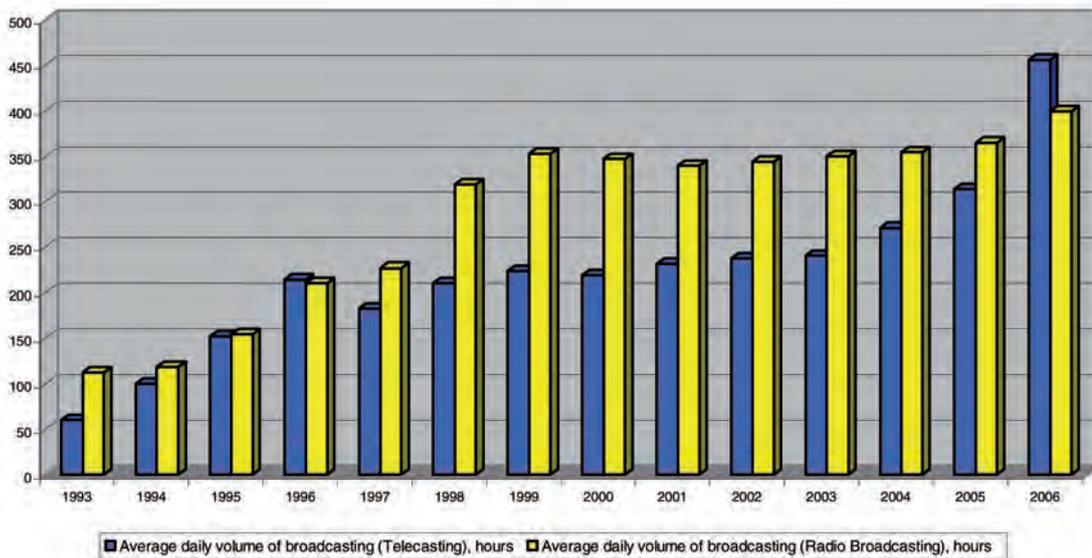
³⁵ The Industrial Television Committee provided assistance while preparing this chapter, <http://www.itk.org.ua/>.

³⁶ Information from the official website of the State Committee of Ukraine on Television and Radio Broadcasting http://comin.kmu.gov.ua/control/publish/article/main?art_id=33842&cat_id=33841

³⁷ The report of the National Council of Ukraine on Television and Radio Broadcasting for 2006 <http://www.nrada.gov.ua/documents/ZVITHP27.01.07.doc>

³⁸ The report of the National Council of Ukraine on Television and Radio Broadcasting for 2005 <http://nrada.itera.net.ua/documents/Zvit2005.doc>

The Development of the Average Number of Telecasting and Radio Broadcasting Hours



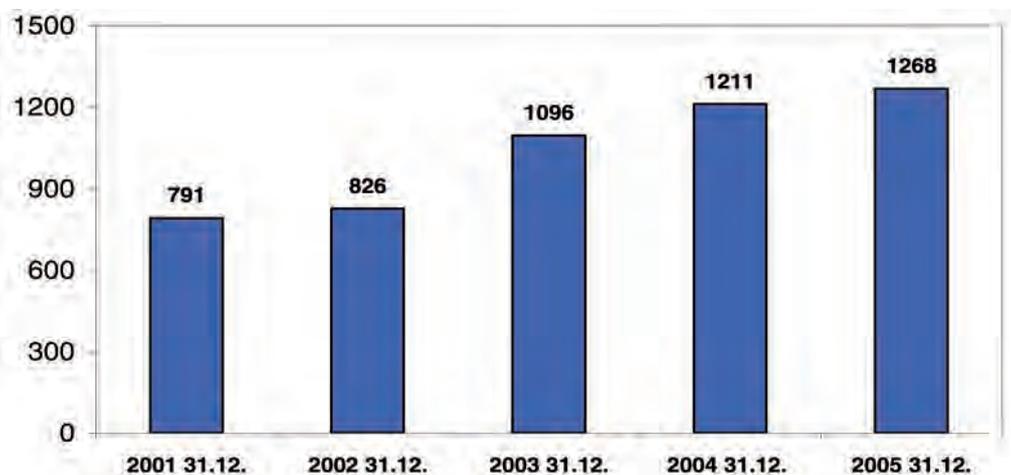
State Committee of Ukraine on Statistics <http://www.ukrstat.gov.ua>

The National Council of Ukraine on Television and Radio Broadcasting granted 360 licenses to television and radio companies in 2006, in particular:

- 1) broadcasting: 256 licenses granted, including 20 licenses to satellite broadcasters, 203 licenses to live broadcasters, 14 licenses to cable broadcasters, 15 licenses to cable broadcasting, four licenses to multi-channel broadcasters.
- 2) 104 licenses were granted to providers of program services.

According to Article 37 of the Law of Ukraine on Television and Radio Broadcasting, the National Council of Ukraine on Television and Radio Broadcasting revoked 27 licenses in 2006; 14 television and radio licenses were revoked at the companies' request and 13 licenses were revoked due to the failure to start broadcasting.

Total Number of Television and Radio Operators in 2001-2005³⁹



³⁹ The report of the National Council of Ukraine on Television and Radio Broadcasting for 2005, <http://nrada.itera.net.ua/documents/Zvit2005.doc>

The adoption of the new version of the Law of Ukraine on Television and Radio Broadcasting offered a single definition: “provider of program services” and made an impact on the cable television market in 2006. The licenses of cable operators operating in Ukraine were also re-registered. Thus, services were provided by 463 providers who obtained 505 licenses giving them the right to use 554 multi-channel cable TV networks. Fourteen separate licenses were also granted to cable broadcasters.

Cable television is watched by around 2 million subscribers, which constitutes around 7.5 million people.⁴⁰

Watching television is a popular leisure activity; for instance, 83.3 per cent of those who took part in the surveys watch television in their free time.⁴¹ According to the research: “Availability of Durables in Households”⁴² carried out by the State Committee of Ukraine on Statistics, 83 per cent of those who took part in the survey in 2004 owned color TV sets: in 2005 and 2006 this figure was 91 per cent and 96 per cent respectively.

The market for television advertising increased to 50 per cent in 2006 and reached a total of 370,000,000 million UAH.⁴³ It accounted for almost 50 per cent of all advertising in the country.

The Main TV Channels in Ukraine

Channel	Audience share (over 18) (%)	Characteristics
Inter	21.43	One of the largest national channels with a varied content, oriented towards family audiences with a slight bias towards older citizens (over 45)
1+1	18.20	One of the largest national channels with a varied content aimed at family audiences with a slight bias towards youth
Novyi Kanal	7.31	A general-content channel with a young target audience
ICTV	7.29	A general-content channel
STB	6.44	A general channel providing news, information and educational programs, oriented towards the educated middle aged
TRK Ukraina	4.51	A general-content channel
TET	2.69	An entertainment channel
First National	2.17	National channel with a general content. This channel lacks funding and therefore is not able to compete with other channels in terms of quality
NTN	2.14	This channel moved from a news orientation to an emphasis on entertainment
5 Channel	2.04	Politically oriented news channel, which gained national popularity for its coverage of events during the Orange Revolution
Tonis	1.41	One of the first commercial channels in Ukraine. It has recently announced plans to shift from a general content to more business-related news and programs
M1	1.21	Youth-oriented music channel, launched in 2001. At present the most successful channel in Ukraine, offering all types of music
Others	22.01	

Source: GfK Ukraine, Dragon Capital.

⁴⁰ Information provided by the Union of Cable Television of Ukraine, <http://sktu.info/?open=everypage&pid=23&lang>.

⁴¹ Source: V.Vorona, M.Shulga (edit.), Ukrainian Society 1994–2004. Social Changes Monitoring, Kyiv Institute of Sociology, 2004. p.639

⁴² The Availability of Durables in Households (2000–2006) <http://www.ukrstat.gov.ua/>

⁴³ Review of the Ukrainian market of telecasting, [http://www.horizoncapital.com.ua/ukr/files/sectors/UA%20TV%20Broadcasting%20Market%20Overview%20\(Ukr\).pdf](http://www.horizoncapital.com.ua/ukr/files/sectors/UA%20TV%20Broadcasting%20Market%20Overview%20(Ukr).pdf)

The Ukrainian TV market can therefore be divided into three groups. Taking into consideration audience share, the leaders are Inter and 1+1, each of them attracting around 20 per cent of the total audience. The second group consists of: Novyi Kanal, ICTV, STB, TRK Ukraina and TET. These channels have a somewhat limited geographical coverage and their audience share ranges from 3 to 7 per cent. A significant number of channels in the third group is also present in the market and includes 5 Channel, First National, NTN, Tonis, M1, and Megasport.

In recent years a tendency to specialization has become noticeable where the growth of competition has forced companies to seek a new target audience. As a result, such specialized channels as M1 (music), Megasport (sports), occupy around the 15th place in the rankings, TET (entertainment), 5 channel (news) improved their ratings and their geographical coverage.

One of the most urgent problems for these organizations is moving to digital broadcasting and phasing out analog broadcasting. Specialists point to possible problems for this process in Ukraine:

- Lack of digital tuners
- Insufficient laws covering the changeover process on the statute book
- Problems of transition when the frequencies for analog broadcasting become unavailable and the starting date for digital broadcasting has not been determined

That is why in order to ensure a smooth changeover to digital broadcasting it would be worthwhile to set up a state donation system in order to supply viewers with digital decoders, to draw up legal practices on the necessary changeover and to regulate the transition period.

Radio

Listening to radio programs has always been and still remains a popular leisure among the Ukrainian population; for instance, 38 per cent of those who took part in the surveys listen to the radio in their spare time. Listeners frequently use radio programs as a background while working and traveling.

The percentage of listeners has been gradually declining since 2000, and this is reflected in the table below. The trend is most probably due to the development of other kinds of media.

Listening to Radio Programs as a Leisure Activity⁴⁴

Type of activity	1994	1996	1998	2000	2002	2004
Listening to the radio (%)	47.3	45.1	50.2	58.2	43.6	38.8

Although radio audiences are gradually declining, the number and profitability of radio stations are increasing. According to data from the All-Ukrainian Advertising Coalition⁴⁵ the radio advertising market amounted to 20,000,000 US dollars (when?? In 2005??), and in 2007 it amounted to 34,000,000 US dollars with the forecast of an increase to 40,000,000 US dollars in 2008.

⁴⁴ Source: V.Vorona, M.Shulga (edit.), *Ukrainian Society 1994–2004. Social Change Monitoring*, Kyiv Institute of Sociology, 2004. p. 639
⁴⁵ All-Ukrainian Advertising Coalition - www.adcoalition.org.ua

At present many radio stations transmit popular music for young people. That is why it is important to research the target audience. Targeting and the increase in competition among the main players on the market are therefore lively.

The new version of the Law of Ukraine on Television and Radio Broadcasting has taken on great importance for the radio market. The Law provides that musical compositions by Ukrainian composers should constitute not less than 50 per cent of the total broadcasting volume.

Among the forecasts for the future of this sector are the continuing process of specialization and a narrowing of the target audience, which in general reflects the general trend worldwide.

4.5. Music, Theatrical Productions, Opera

Music Publishing and Recording⁴⁶

The Ukrainian sound recording market has developed strongly since independence, and this is demonstrated by the large number of companies working in the field. Over the last few years Ukrainian singers and, in particular, the victory of the popular singer Ruslana at the Eurovision song contest in 2004, have contributed much to the development of the music market and brought recognition to the industry.

The sound recording companies in Ukraine can be divided into two main groups: companies which are the members of the International Federation of the Phonographic Industry (IFPI) and independent sound recording companies.

On March 28, 2007, the members of IFPI, amalgamated and created the Ukrainian Music Industry Association (the Association) with the aim of protecting their interests. These were the following: Comp Music, Ukrainian Sound Recording, Lavina Music, Kyiv-Eurostar, Fair Music, and Madgors Music. According to the Association the market share of these companies amounted to 50 per cent.

The major independent companies in the Ukrainian market which are not members of the Association are: Odissei, Alegro (JRC), Studio Moon (Moon Records), Astra Records. According to information from the *Nashe* website⁴⁷ there were approximately 50 such companies.

Volume of Sales of the Carriers of Music Recordings in Ukraine (According to the Association)

Total volume of the music market	2002	2003	2004	2005	2006
'000'000 UAH	167.6	224.3	221.7	231.6	225.3

Therefore, according to the Association's data, sales of carriers of sound recordings amounted to 231.6 million UAH in 2005, constituting an outlay of 4.9 UAH per head per year.⁴⁸

⁴⁶ Ukrainian Music Industry Association provided assistance for the preparation of this Chapter, <http://www.uami.org.ua>.

⁴⁷ <http://nashe.com.ua/>

⁴⁸ The population of Ukraine stood at 46,958,740 in December 2005 according to information provided by the State Committee of Ukraine on Statistics <http://www.ukrstat.gov.ua/>.

These are extremely low figures and can be explained by the following factors:

- The high level of piracy (according to the IFPI estimates for 2006 to 2007). The level of music piracy on the physical carriers amounted to 55 per cent of the entire music market.⁴⁹
- Development of digital technologies for storing and recording, which enable copies to be made without compromising the quality.
- Gradual development of the illegal exchange of music files over the Internet. Downloading music files from the Internet and listening to them on different types of audio player such as mobile phones have proved popular.

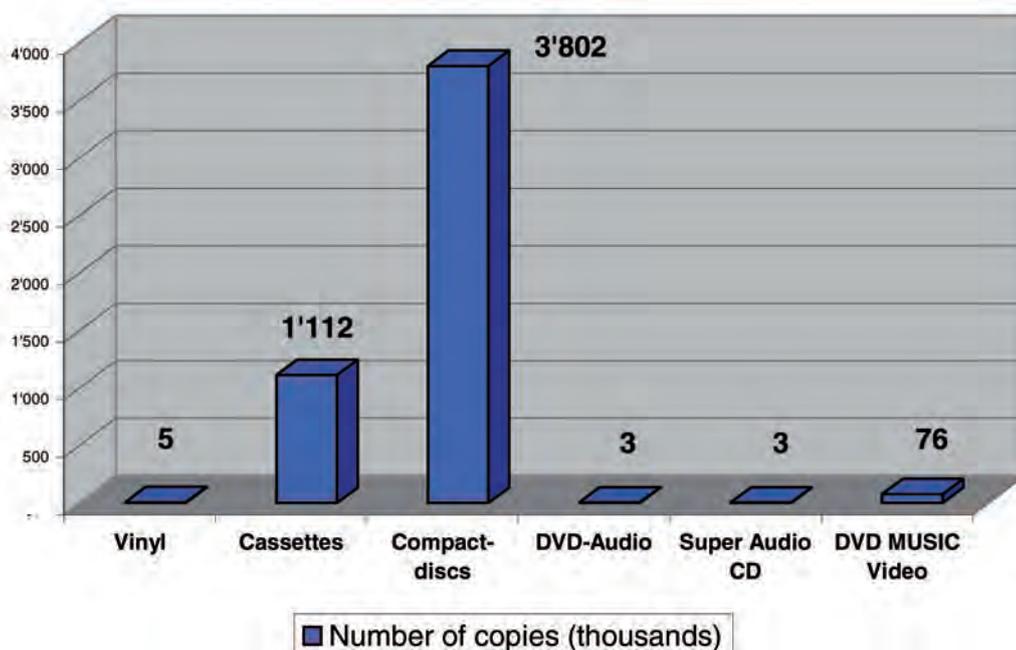
Leisure Activities in Ukraine in 1994-2004⁵⁰

Type of activity	1994	1996	1998	2000	2002	2004
Listening to music (%)	32.4	32.4	32.9	34.5	22.2	25.6

Looking at the progress of leisure activities it was seen that the number of people listening to music gradually declined from 32.4 per cent in 1994 to 25.6 per cent in 2004. It is also worth mentioning that the number of sources for accessing music production increased. The existence of a few music channels and a large number of radio stations playing popular music provided greater choice.

The State Department of Intellectual Property issued 13,453,156 control marks for category "A" (audio cassettes) in 2005. According to research carried out, 12,229,932 control marks were issued for category "K" (CDs), and these two categories combined constituted 25,683,088 copies sold or 0.5 copies per head of the population in 2005.

Sales for Music Recording Carriers who were Association Members in Ukraine in 2006 (According to information provided by the Association)



⁴⁹ According to the information from the Ukrainian Music Industry Association website, <http://www.uami.org.ua/ua/law/piracy/7.html>

⁵⁰ Source: V. Vorona, M. Shulga (edit.), Ukrainian Society 1994–2004. Social Change Monitoring, Kyiv Institute of Sociology, 2004. p. 639

Sales for Music Recording Carriers who were Association Members in Ukraine in 2006

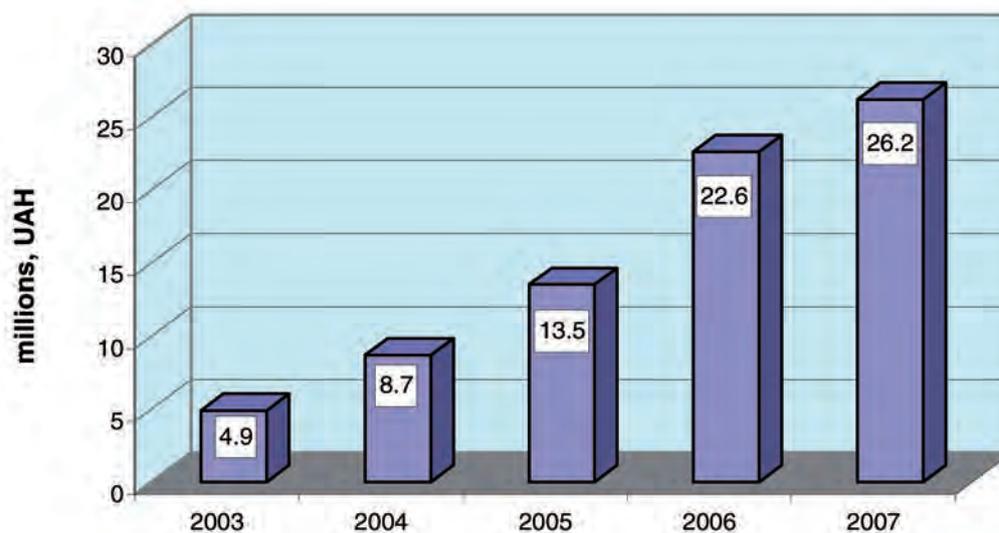
(According to information provided by the Association)

	Number of copies sold ('000)	Wholesale price ('000 UAH)	Evaluated sale price ('000 UAH)	Market volume (%)
Singles	16	147	231	50
Albums	4,925	62,805	112,674	50
Vinyl	5	82	114	
Cassettes	1,112	4,096	8,122	
CDs	3,802	58,246	103,840	
DVDs-audio	3	145	243	
Super audio CDs	3	236	355	
(Music videos)	76	2,045	3,698	30
DVD music videos				

The development of new technologies and the wide use of copyright and related rights in radio and television broadcasting as well as cable retransmission led to the improvement of collective management systems throughout the world.

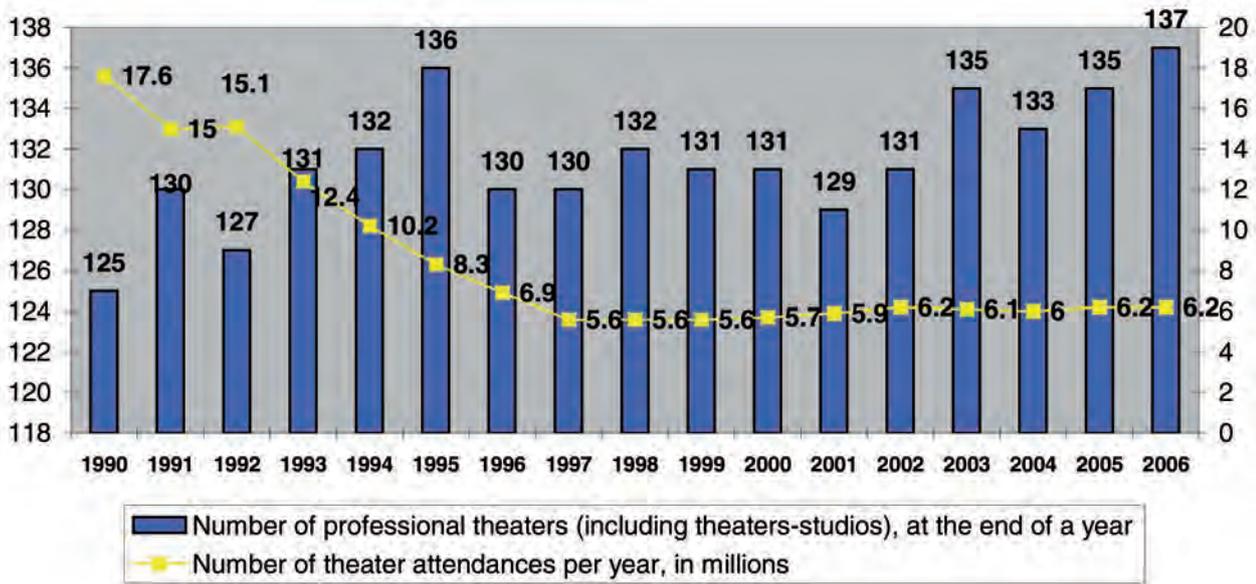
Twelve collective management societies were operating in Ukraine at the end of 2007, the majority in the music sphere. If we consider the data in the table below, a constant increase in the amounts collected can be seen. These amounts have increased 5.35 times over a period of five years. Considering the availability of a large number of legal entities who still have not concluded agreements with collective management societies,⁵¹ it can be said that the amounts of remuneration for authors, performers, phonogram producers, broadcasting organizations and their successors will greatly increase in the future.

Remuneration Collected by Collective Management Societies in 2003-2007



⁵¹ The restaurant network in Ukraine which includes restaurants, cafés, bars, canteens, consists of 56,600 outlets according to research carried out by the State Committee on Statistics: *The State of the Trading and Restaurant Networks in Ukraine in 2005*. Only about 2 per cent of these entities have concluded agreements with collective management societies for the public performance of music.

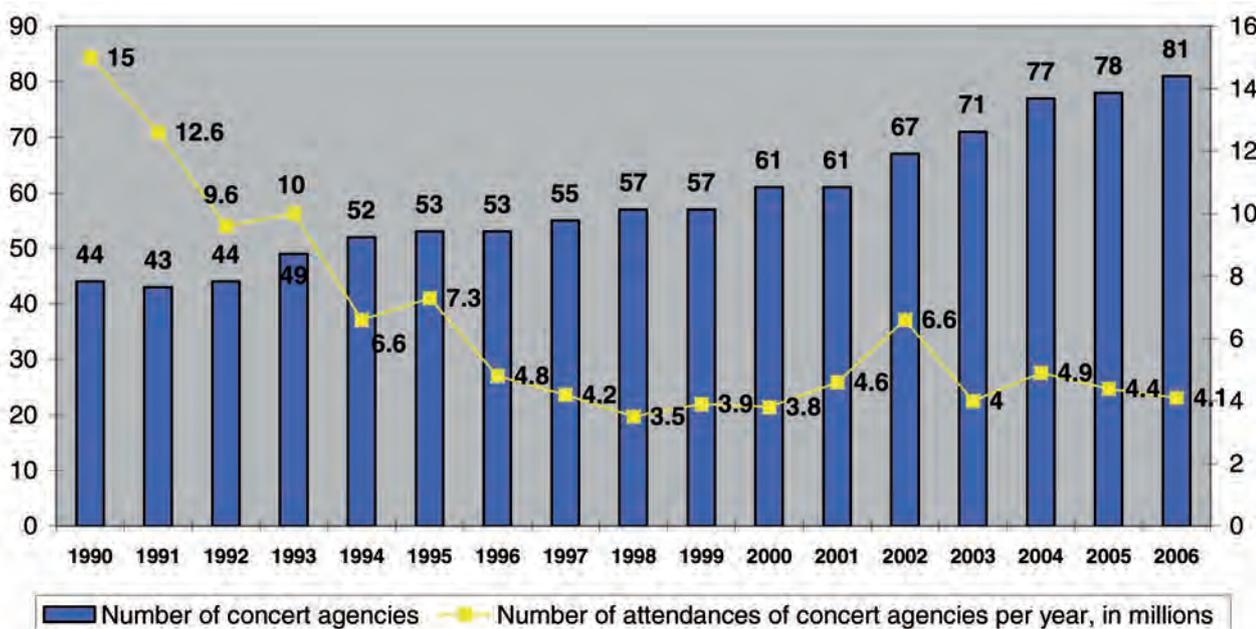
The Number of Theaters in Ukraine and Attendances (1990-2006)



State Committee of Ukraine on Statistics <http://www.ukrstat.gov.ua>

There is a large network of theaters, art studios, concert agencies and creative entities under different forms of ownership operating in Ukraine.

Number of Concert Agencies in Ukraine and Attendances (1990-2006)



State Committee of Ukraine on Statistics <http://www.ukrstat.gov.ua>

There were 137 theaters and 81 concert halls operating in 2006.

According to information provided by the Ukrainian Ministry of Culture and Tourism,⁵² there were five theaters under state ownership and 125 under municipal ownership in 2006. It may therefore be concluded that there is a lack of information on the number of privately owned theaters in the state statistic-gathering system.

If we consider the two tables above, a steep decline in attendances at concerts since 1990 can be observed. In the case of theaters, a similar tendency can be seen for the period since 1992. Since 1997 a slow stabilization in the number of attendances can be seen both for theaters and concert halls. The development of new entertainment sectors and the severe economic situation in the country have led to a decrease in the number of attendances at theaters and concert halls. It can also be said that they have good potential for increasing attendances, as only 13 per cent of the population attended a theater or concert performance each year.

It is traditional for Ukrainian theaters to be heavily dependent on state support, as the major part of their budget comes from state funds. However, theaters do not usually receive sufficient state funding, which is why they are forced to seek alternatives. For example, in 1993, theater earnings were equal to 6.2 per cent of the total funding; in 1996 this figure was 16.5 per cent, and in 2001 it amounted to 28.5 per cent. We noted that the amount of theater revenue for 2001 exceeded the planned amount and constituted 194.7 per cent.

Taking account of the lack of financial support, outdated material and technical resources, the urgent need for repairs to premises, as well as the situation where theaters are forced to carry on working in order to ensure funding, it is necessary to consider the possibility of reform of the system of state funding and increasing its effectiveness. It may also be advisable to consider the possibility of funding not only state-run theaters but to introduce a system of support for privately run art studios and theaters through competitions or the allocation of grants.

⁵² National report on the policy in the sphere of culture in Ukraine http://www.mincult.gov.ua/nac_zvit_cult1.rar

Appendix 1

Methodological Explanations

The System of National Accounts (SNA) is a combination of indicators providing coherent descriptions of fundamental economic processes and events: production, income, consumption, capital formation and finance.

The State Statistics Committee compiles national accounts in line with the UN 1993 SNA.

As required by international SNA standards, institutional units are grouped into five sectors:

Non-financial corporations refer to the institutional units involved in the production of marketable goods and services at prices reflecting their production costs and showing a profit.

Financial corporations include institutional units operating as financial intermediaries (banks, insurance companies, etc.).

General government incorporates central and local government, non-profit budgetary spending units and extra-budgetary funds earmarked by the state.

Households relate to consumers and, in some cases, non-corporate economic agents.

Non-profit institutions serving households (NPISH) refer to the institutional units of individual household groups established to satisfy their political, religious or professional interests, and also rendering social and cultural services (social and cultural sectors of non-financial corporations).

The SNA reflects the growth of the economy at various stages of the reproduction process, documents the turnover of goods and services, and also GDP production and consumption.

The manufacturing stage is characterized by production, intermediate consumption and GDP

Production is the value of goods and services resulting from national economic activity throughout the reference period.

Intermediate consumption covers the value of goods and services used by the institutional units to meet their production needs.

Gross value added (GVA) is the difference between production and intermediate consumption. It includes the primary income generated and distributed by producers.

National accounts use two data levels and two assessment methods. For the economy as a whole, economic results are measured by goods and services produced and by GDP at market prices. Industries are measured with production at basic prices and GVA.

Gross domestic product (GDP) at the production stage is defined as the difference between production at market prices and intermediate consumption valued at consumer prices or as the total of GVA by industries and taxes after deduction of subsidies. Dating from 2001, GVA has been compiled by economic activity.

Taxes on products include tax whose value directly depends on the amount and value of goods and services produced, sold or imported through a national agent.

Subsidies on products refer to agricultural or other prices administered by means of state budget allocations to enterprises. These allocations aim to reflect operating costs and improve the financial standing of the beneficiaries. Subsidies on products may replenish working capital or offset individual costs.

Income generation includes compensation for employees, other production taxes and other subsidies on production or gross (net) product.

Remuneration of employees includes wages, actual, and conventional contributions for social insurance programs set up by employers and based on accrued sums. Wages are defined as remuneration in cash or in kind paid by employers to employees for work carried out during a reference period, regardless of whether these employees live in the country or not.

Taxes on production and imports include tax on products and on production, and subsidies on production and imports include subsidies on products and on production.

Other taxes on production include company payments to central and local budgets, the state budget and extra-budgetary funds for use of resources and the obtaining of licenses for specific activities.

Other subsidies on production refer to transfers under defined economic and social programs regulating the use of resources.

Gross (net) operating surplus shows the return over expenditure on company activities. For the household sector, this is mixed income. The net operating surplus equals the gross operating surplus less fixed capital consumption.

GDP consumption is the final point of consumption of goods and services, gross capital formation and net exports.

Final consumption of goods and services includes household expenditures on individual consumption, general government expenditures to satisfy individual and collective needs, and also final individual expenditures by non-profit institutions serving households.

Gross capital formation is the total of gross fixed capital formation, changes in inventories and acquisitions after disposals of valuables.

Net exports in goods and services show the difference between exports and imports in goods and services.

Input-output table for consumer prices conforms to SNA requirements. This table provides a comprehensive picture of the reproduction processes and the relationships between economic activities. The indicators and evaluation methods used are identical to the system of national accounts. The table reveals production relationships between economic activities, values of GDP components and use of GDP for final consumption and gross capital formation.

Appendix 2

Ukrainian Classification of Goods in Terms of Foreign Economic Activity

Core Copyright Industries

Press and Literature	
4902000000	Newspapers, journals and periodicals, whether or not illustrated or containing advertising material
4901000000	Printed books, brochures, leaflets and similar printed matter, whether or not in single sheets
4903000000	Children's picture, drawing or coloring books
4905000000	Maps and hydrographic or similar charts of all kinds, including atlases, wall maps, topographical plans and globes, printed
4907000000	Unused postage, revenue or similar stamps of current or new issue in the country in which they have, or will have, a recognized face value; stamp-embossed paper; banknotes; check forms, stock, share or bond certificates and similar documents of title
4909000000	Printed or illustrated postcards, printed cards bearing personal greetings, messages or announcements, whether or not illustrated, with or without envelopes or trimmings
4910000000	Calendars of any kind, printed, including calendar blocks
4911000000	Other printed matter, including printed pictures, prints and photographs

Music, Theatrical Productions, Opera	
4904000000	Music, printed or in manuscript, whether or not bound or illustrated
8524000000	Records, tapes and other recorded media for sound or other similarly recorded phenomena, including matrices and masters for the production of records, but excluding products under chapter 37

Motion Picture and Video	
8524000000	Records, tapes and other recorded media for sound or other similarly recorded phenomena, including matrices and masters for the production of records, but excluding products under chapter 37

Radio and Television	
8524000000	Records, tapes and other recorded media for sound or other similarly recorded phenomena, including matrices and masters for the production of records, but excluding products under chapter 37

Visual and Graphic Arts	
3926 40 00 00	Original sculptures and statutory in any material
9701000000	Paintings, drawings and pastels executed entirely by hand, other than drawings under heading 4906 and other than hand-painted or hand-decorated manufactured articles; collages and similar decorative plaques
9703000000	Original sculptures and statutory, in any material
9704000000	Postage or revenue stamps, stamp-postmarks, first-day covers, postal stationery (stamped paper), and the like, used or unused, other than those under heading 4907
4908000000	Transfers (decalcomanias)
4906000000	Plans and drawings for architectural, engineering, industrial, commercial, topographical or similar purposes, being originals drawn by hand; hand-written texts, photographic reproductions on sensitized paper and carbon copies of the foregoing

Interdependent Industries

	TV Sets, Radios, VCRs, CD Players, DVD Players, Cassette Players, Electronic Game Equipment and Other Similar Equipment
8519000000	Turntables (record-decks), record-players, cassette-players and other sound reproducing apparatus, not incorporating a sound recording device
8520000000	Magnetic tape recorders and other sound recording apparatus, whether or not incorporating a sound reproducing device
8521000000	Video recording or reproducing apparatus whether or not incorporating a video tuner
8527000000	Receiving apparatus for radio-telephony, radio-telegraphy or radio-broadcasting, whether or not combined in the same housing, with sound recording or reproducing apparatus or a clock
8528000000	Receiving apparatus for television, whether or not incorporating radio-broadcast receivers or sound or video recording or reproducing apparatus; video monitors and video projectors
8529000000	Parts suitable for use solely or principally with the apparatus under headings 8525-8528

	Computers and Equipment
8542000000	Electronic integrated circuits and micro-assemblies
8471000000	Automatic data processing machines and units thereof, magnetic or optical readers, machines for transcribing data onto data media in coded form and machines for processing such data, not elsewhere specified or included

	Musical Instruments
Chapter 92	Musical instruments

	Photographic and Cinematographic Instruments
3701000000	Photographic plates and film flat, sensitized, unexposed, of any material other than paper, paperboard or textiles; instant print film flat, sensitized, unexposed, whether or not in packs
3702000000	Photographic film in rolls, sensitized, unexposed, of any material other than paper, paperboard or textiles; instant print film in rolls, sensitized, unexposed
3703000000	Photographic paper, paperboard and textiles, sensitized, unexposed
3704000000	Photographic plates, film, paper, paperboard and textiles, exposed but not developed
3705000000	Photographic plates and film, exposed and developed, other than cinematographic film
3706000000	Cinematographic film, exposed and developed, whether or not incorporating a sound track or consisting only of sound track
3707000000	Chemical preparations for photographic use (other than varnishes, glues, adhesives and similar preparations), unmixed products for photographic use in measured portions or for retail sale in a form ready for use
9006000000	Photographic (other than cinematographic) cameras; photographic flashlight apparatus and flashbulbs other than discharge lamps under heading 8539
9007000000	Cinematographic cameras and projectors, whether or not incorporating sound recordings or reproducing apparatus
9008000000	Image projectors, other than cinematographic, photographic (other than cinematographic) enlargers and reducers
9010000000	Apparatus and equipment for photographic (including cinematographic) laboratories (including apparatus for the projection or drawing of circuit patterns on sensitized semi-conductor materials), not specified or included elsewhere in this chapter, negatoscopes; projection screens

	Photocopiers
9009000000	Photocopying apparatus incorporating an optical system or of the contact type and thermocopying apparatus:
8472100000	Duplicating machines

	Blank Recording Material
3907400000	Polycarbonates
8477109000	Other

8480719090	Other
8523000000	Prepared unrecorded media for sound recording or similar recording of phenomena other than products under chapter 37

	Paper
4801000000	Newsprint, in rolls or sheets
4802000000	Uncoated paper and paperboard of a kind used for writing, printing or other graphic purposes, and non-perforated punch cards and punch tape paper, in rolls or rectangular (including square) sheets, of any size, other than paper under headings 4801 or 4803
4809000000	Carbon paper, self-copy paper and other copying or transfer papers (including coated or impregnated paper for duplicator stencils or offset plates), whether or not printed, in rolls or sheets
4810000000	Paper and paperboard, coated on one or both sides with kaolin (China clay) or other inorganic substances, with or without a binder, and with no other coating, whether or not surface-colored, surface-decorated or printed, in rolls or rectangular
4821000000	Paper or paperboard labels of all kinds, whether or not printed

Partial Copyright Industries

	Apparel, textiles and footwear
3926200000	Articles of apparel and clothing accessories (including gloves, mittens and mitts)
4202000000	Trunks, suit-cases, vanity-cases, executive cases, briefcases, school satchels, spectacle cases, binocular cases, camera cases, musical instrument cases, gun cases, holsters and similar containers; traveling-bags, insulated food or beverage bags, toilet bags
4203000000	Articles of apparel and clothing accessories of leather or composition leather
4204000000	Articles of leather or composition leather, of a kind used in machinery or mechanical appliances or for other technical use
4303000000	Articles of apparel and clothing accessories of leather or composition leather
4304000000	Articles of leather or composition leather
5007000000	Woven fabrics of silk or silk waste
Chapter 60	Knitted fabrics
Chapter 61	Articles of apparel and clothing accessories, knitted
6201000000	Men's or boys' overcoats, car-coats, capes, cloaks, anoraks (including ski-jackets), wind-cheaters, wind-jackets and similar articles, other than those under heading 6203
6202000000	Women's or girls' overcoats, car-coats, capes, cloaks, anoraks (including ski-jackets), wind-cheaters, wind-jackets and similar articles, other than those under heading 6204
6203000000	Men's or boys' suits, ensembles, jackets, blazers, trousers, bib and brace overalls, breeches and shorts (other than swimwear)
6204000000	Women's or girls' suits, ensembles, jackets, blazers, dresses, skirts, divided skirts, trousers, bib and brace overalls, breeches and shorts (other than swimwear)
6205000000	Men's or boys' shirts
6206000000	Women's or girls' blouses, shirts and shirt-blouses
6207000000	Men's or boys' singlets and other vests, underpants, briefs, nightshirts, pajamas, bathrobes, dressing gowns and similar articles
6208000000	Women's or girls' singlets and other vests, slips, petticoats, briefs, panties, nightdresses, pajamas, negligees, bathrobes, dressing gowns and similar articles
6209000000	Babies' garments and clothing accessories
6210000000	Garments made-up from fabrics under headings 5602, 5603, 5903, 5906 or 5907
6211000000	Track suits, ski suits and swimwear other garments
6212000000	Brassieres, girdles, corsets, braces, suspenders, garters and similar articles and parts thereof, whether or not knitted or crocheted
6213000000	Handkerchiefs:
6214000000	Shawls, scarves, mufflers, mantillas, veils and the like
6215000000	Ties, bow ties and cravats
6216000000	Gloves, mittens and mitts
6217000000	Other made-up clothing accessories; parts of garments or of clothing accessories, other than those under heading 6212
6401000000	Waterproof footwear with outer soles and uppers of rubber or plastic, the uppers of which are neither fixed to the sole nor assembled by stitching, riveting, nailing, screwing, plugging or similar processes

6402000000	Other footwear with outer soles and uppers of rubber or plastic
6403000000	Footwear with outer soles of rubber, plastic, leather or composition leather and uppers of leather
6404000000	Footwear with outer soles of rubber, plastic, leather or composition leather and uppers of textile materials
6405000000	Other footwear
Chapter 65	Headgear and parts thereof

Jewelry and Coins	
7101000000	Pearls, natural or cultured, whether or not worked or graded but not strung, mounted or set; pearls, natural or cultured, temporarily strung for convenience of transport
7102000000	Diamonds, whether or not worked, but not mounted or set
7103000000	Precious stones (other than diamonds) and semi-precious stones, whether or not worked or graded but not strung, mounted or set; un-graded precious stones (other than diamonds) and semi-precious stones, temporarily strung for convenience of transport
7104000000	Synthetic or reconstructed precious or semi-precious stones, whether or not worked or graded but not strung, mounted or set; un-graded synthetic or reconstructed precious or semi-precious stones, temporarily strung for convenience of transport
7105000000	Dust and powder of natural or synthetic precious or semi-precious stones
7106000000	Silver (including silver plated with gold or platinum), unwrought or in semi-manufactured forms, or in powder form
7107000000	Base metals clad with silver, not further worked than semi-manufactured
7108000000	Gold (including gold plated with platinum), unwrought or in semi-manufactured forms, or in powder form
7109000000	Base metals or silver, clad with gold, not further worked than semi-manufactured
7110000000	Platinum, unwrought or in semi-manufactured or in powder form
7112000000	Waste and scrap of precious metals or of metal clad with precious metals; other waste and scrap containing precious metal or precious metal compounds, of a kind used principally for the recovery of precious metals
7113000000	Articles of jewelry and parts thereof, of precious metals or of metal clad with precious metals
7114000000	Articles of goldsmiths' or silversmiths' wares and parts thereof, of precious metals or of metal clad with precious metals
7115000000	Other articles of precious metals or of metal clad with precious metals
7116000000	Articles of natural or cultured pearls, precious or semi-precious stones (natural, synthetic or reconstructed)
7117000000	Imitation jewelry
7118000000	Coins

Other Crafts	
4420000000	Wood marquetry and inlaid wood; caskets and cases for jewelry or cutlery and similar articles of wood, statuettes and other wooden ornaments, wooden articles of furniture not coming under chapter 94:
Chapter 58	Special woven fabrics, tufted textile fabrics, lace; tapestries, trimmings, embroidery
6702000000	Artificial flowers, foliage and fruit and parts thereof; articles made of artificial flowers, foliage or fruit
9601000000	Worked ivory, bone, tortoise-shell, horn, antlers, coral, mother-of-pearl and other animal carving material, and articles made from these materials (including articles obtained by molding)

Furniture	
9602000000	Worked vegetable or mineral carving material and articles made from these materials; molded or carved articles wax, searing, natural gums or natural resins or modeling pastes, and other molded or carved articles, not elsewhere specified or included
1401000000	Vegetable materials of a kind used primarily for plaiting (for example, bamboos, rattans, reeds, rushes, willow, raffia, cleaned, bleached or dyed cereal straw, and lime bark)

1402000000	Vegetable materials of a kind used primarily as stuffing or padding (for example, kapok, vegetable hair and eel-grass), whether or not used as a layer with or without supporting material
9401000000	Seats (other than those under heading 9402), whether or not convertible into beds, and parts thereof
9403000000	Other furniture and parts thereof
9404000000	Mattress supports; articles of bedding and similar furnishings (for example, mattresses, quilts, eiderdowns, cushions, pouffes and pillows) fitted with springs or stuffed or internally fitted with any material or of cellular rubber or plastic, whether or not covered

	Household Goods, China and Glass
6911000000	Tableware, kitchenware, other household articles and toilet articles of porcelain or china
6912000000	Ceramic tableware, kitchenware, other household articles and toilet articles, other than of porcelain or china
6913000000	Statuettes and other ornamental ceramic articles
6914000000	Other ceramic articles
7013000000	Glassware of a kind used for table, kitchen, toilet, office, indoor decoration or similar purposes (other than under headings 7010 or 7018)
7018000000	Glass beads, imitation pearls, imitation precious or semi-precious stones and similar glass small wares and articles thereof other than imitation jewelry; glass eyes other than prosthetic articles; statuettes and other ornaments of lamp-worked glass
7006000000	Glass under headings 7003, 7004 or 7005, bent, edge-worked, engraved, drilled, enameled or otherwise worked, but not framed or fitted with other materials
7016000000	Paving blocks, slabs, bricks, squares, tiles and other articles of pressed or molded glass, whether or not wired, of a kind used for building or construction purposes; glass cubes and other glass small wares, whether or not on a backing, for mosaics
7018000000	Glass beads, imitation pearls, imitation precious or semi-precious stones and similar glass small wares, and articles thereof other than imitation jewelry; glass eyes other than prosthetic articles; statuettes and other ornaments of lamp-worked glass

	Wall Coverings and Carpets
Chapter 57	Carpets and other textile floor coverings
4814000000	Wallpaper and similar wall coverings; window transparencies of paper

	Toys and Games
9501000000	Wheeled toys designed to be ridden by children (for example, tricycles, scooters, pedal cars); dolls' carriages
9502000000	Dolls representing only human beings
9503000000	Other toys, reduced-size (scale) models and similar recreational models, working or not; puzzles of all kinds
9504000000	Articles for funfairs, table or parlor games, including pintables, billiards, special tables for casino games and automatic bowling alley equipment

	Museums
9705000000	Collections and collectors' pieces of zoological, botanical, mineralogical, anatomical, historical, archeological, paleontological, ethnographic or numismatic interest
9706000000	Antiques of an age exceeding 100 years

Appendix 3

Classification of Services in Foreign Trade

Core Copyright Industries
92.4 Publishing agency services
22 Publishing services, including: software media reproduction; reproduction of recorded videos; publishing services for advertising materials
92.3 Other entertainment services connected with/including: dramatic arts, music and other arts services; booking agency services; music publishing services and other services.
92.1 Motion picture and video services, including: motion picture and video production and distribution services; motion picture projection services; creation advertisement materials for radio, TV services; video and TV tape processing
71.4 Renting of personal and household goods n.e.c.
92.2 Radio and television services
64.2 Telecommunication services
74.8 Other services to legal entities, including: photo services, packing services; secretarial services, interpreting services; other services not included in other categories.
72.1 Consultation services on the issues of informatization
72.2 Creation of software services
72.4 Database processing services
72.3 Data processing services
74.4 Advertising services
Interdependent Industries
32.1 Manufacture of parts for electronic devices
32.2 Manufacture of television and radio receivers
32.3 Manufacture of sound or video recording or reproducing apparatus, and associated goods
71.3 Renting of machinery and equipment
30 Manufacture of office, accounting and computing machinery
36.3 Manufacture of musical instruments
33.4 Manufacture of optical instruments and photographic equipment
21 Manufacture of pulp, paper and paperboard
Partial Copyright Industries
18 Manufacture of wearing apparel and furs
17 Manufacture of made-up textile articles
19 Manufacture of leather and leather footwear
36.2 Manufacture of jewelry and related articles
36.1 Manufacture of furniture
26 Manufacture of other fabricated nonmetal products n.e.c.
20 Wood processing and manufactured articles from wood
28 Metal processing
36.5 Manufacture of games and toys
74.2 Architectural and engineering services
45.43 Walls and floor coverings
45.45 Other services connected with construction activities, including decorating
92.5 Other services related to culture, including library services, museum services, other services connected with preservation of national heritage

Appendix 4

Classification of Services in Foreign Trade

Core Copyright Industries	
Press and Literature	22.11 Book publishing 22.12 Newspaper publishing 22.13 Publishing of journals and other periodicals 22.15 Other publishing activities 22.21 Printing newspapers 22.22 Printing activities not related to other activities 22.23 Binding printed materials 22.24 Production of forms 22.25 Other services related to publishing 51.47.2 Wholesale of paper products, books, newspapers and periodicals 52.47 Retail sale of books, newspapers and paper products 52.5 Retail of second-hand goods 71.40 Renting personal and household goods 74.83 Secretarial services, interpreting 74.84 Other services to legal entities not included in other categories 92.31 Dramatic arts and musical activities 92.40 Publishing agencies 92.51 Activities of libraries
Music, Theater, Opera	22.14 Printing and publishing of music 22.31 Reproduction of recorded media on magnetic media 51.43 Wholesale of radio/television goods 52.45 Retail sale of radio/television goods 71.40 Renting personal and household goods 74.84 Other services to legal entities not included in other categories 92.31 Dramatic arts and musical activities 92.32 Activities in areas of public entertainment 92.33 Attraction and amusement park activities 92.34 Various entertainment activities 92.72 Other activities in the sphere of recreation and entertainment
Motion Picture and Video	22.32 Reproduction of recorded videos 51.43 Wholesale of radio/television goods 71.40 Renting of personal and household goods 74.84 Other services to legal entities not included in other categories 92.11 Motion picture and video production 92.12 Motion picture and video distribution 92.13 Motion picture projection 92.31 Dramatic arts and musical activities
Radio and TV	92.2 Radio and television activities 64.2. Telecommunications 71.34 Rental of other machinery
Photography	74.81 Photographic activities
Software and Databases	22.33 Software media reproduction 52.48.1 Retail of computers and software 72.10. Consultation on informatization 72.20 Creation of software 72.30 Database processing

	72.40 Database processing
Visual and Graphic Arts	74.84 Other services to legal entities not included in other categories
	92.31 Dramatic arts and musical activities
	92.52 Activities for preservation of cultural heritage
Advertising Services	74.4 Advertising
Copyright Collecting Societies	91.12 Activities of professional organizations
Interdependent Industries	
TV Sets, Radios, VCRs, CD Players, DVD Players, Cassette Players, Electronic Game Equipment and Other Similar Equipment	32.3 Manufacturing sound and video recording or reproducing apparatus 51.43 Wholesale of radio/television goods 52.45 Retail sale of radio/television goods 71.40 Renting of personal and household goods
Computers and Equipment (including photocopiers)	30.02 Manufacturing of accounting and computing machinery 51.64.1 Wholesale of accounting and computing machinery, office furniture 52.48.1 Retail of computers and software 71.33 Rental of accounting and computing machinery, office machinery
Musical Instruments	36.3 Manufacturing of musical instruments 51.47.9 Wholesale of household goods not included in other categories 52.45 Retail sale of radio/television goods 71.40 Renting of personal and household goods
Photographic and Cinematographic Instruments	33.4 Manufacturing of optical instruments and photographic equipment 51.47.9 Wholesale of household goods not included in other categories 52.48.3 Specialized retail of optical instruments and photographic equipment
Blank Recording Material	24.65 Manufacture of blank recording material
Paper	21 Manufacture of paper and paperboard 29.55 Manufacture of machinery for pulp, paper, paperboard and other items 51.56 Wholesale of other intermediate products
Partial Copyright Industries	
Apparel, Textiles and Footwear	17.4 Manufacture of items from textiles 17.53 Manufacture of materials from non-woven textiles 17.54 Manufacture of textile items not included in other categories 17.6 Manufacture of knitted fabrics 17.7 Manufacture of items from textiles and woven materials 18.10 Manufacture of leather and other clothes 18.3 Manufacture of fur and items from fur 19.30 Manufacture of footwear 51.41 Wholesale of textiles 51.42 Wholesale of apparel and footwear 52.41 Retail of textiles 52.42 Retail of apparel and other clothing 52.43 Retail of footwear and leather items
Jewelry and Coins	36.2 Manufacture of jewelry 36.61 Manufacture of imitation jewelry 51.47.9 Wholesale of household goods not included in other categories 52.48.2 Specialized retail of watches and jewelry items 52.73 Repair of watches and jewelry items
Other Crafts	52.48.7 Specialized retail of souvenirs, handicrafts and religious items
	36.1 Manufacture of furniture 51.47.1 Wholesale of furniture, carpets and other floor coverings, non-electric appliances 51.64.2 Wholesale of office furniture

Non-Dedicated Support Industries	
	Section G: Wholesale and retail; trade in motor vehicles; repair services
	Section I: Transport

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