

# Copyright-Based Industries - An Important Sector of Economic Growth in Romania

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## Abstract

*In the present paper we analyse the economic contribution of copyright-based industries (CI) to Romania's GDP and foreign trade in the period 2000-2005 using the WIPO classification and methodology of these industries: core industries; interdependent, partial; nondedicated.*

*The main results of our research are as follows: the share of total CIs in GDP is increasing over the analysed period from 3.75 to 5.55 percent; core copyright-based industries have the largest contribution to GDP (3.55 percent in 2005).*

*CIs export value is much more reduced than CIs import value, the trade deficit being a challenge for Romanian CIs on medium and long terms.*

**Key words:** *copyright-based industries; core, interdependent, partial, dedicated industries; cultural-creative industries*

As one of the main components of intellectual property, the copyright and its related rights refer to “every production in the literary, scientific and artistic domain, whatever may be the mode or form of expression”<sup>1</sup>.

Original literary and scientific works are under the copyright protection which, unlike protection of inventions covered under patent law, is protecting the form of expression of ideas and not the ideas themselves.

Copyright law protects creativity under the form of choice and arrangements of words, musical notes, colour, shapes and movements. The protection covers the owner of property rights against those who “copy” or otherwise take and use the form in which the original work was expressed by the author<sup>2</sup>.

The following types of works are usually protected under most national copyright laws: literary, artistic and musical works; maps and technical drawings; photographic works; motion pictures and cinematographic works; computer programs and data bases.

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<sup>1</sup> \*\*\* *The Convention for the Protection of Producers of Phonograms Against Unauthorized Duplication of their Phonograms – Phonograms Convention (Geneva, 1971) and the Convention Relating to the Distribution of Program – Carrying Signales Transmitted by Satellite of 1973*

<sup>2</sup> \*\*\* *Basic Notions of Copyright and Related Rights, WIPO/CNR/KTM/71/1; WIPO Guide on surveying the economic contribution of the copyright-based industries, Geneva, 2003, pag. 13*

The copyrighted works produce many economic and social effects the analysis and measurement of which are becoming more and more an autonomous scientific research domain known as “economics of copyright”, “cultural economics” or “media economics”.

The present study estimates the added value and foreign trade of so called “*copyright-based industries*” (CIs) where the economic characteristics of copyright and related rights play an important role.

CIs imply several overlapping notions such as cultural products, copyrighted works, creative industries, cultural industries.

Although very often these terms are synonymous, special literature is differentiating their meaning. For instance, “cultural industries” are activities producing works with culturally significant content reproduced on an industrial scale, the most frequent being related to mass media products.

“Creative industries” refers to a wider sphere of activities related to live performances, cultural heritage and other artistic activities. Besides cultural industries they include cultural and artistic works live or produced as an individual unit (Table 1).

The distinction between cultural and creative industries is very often unclear.

“Cultural economics” study the role and impact of cultural goods and services on social and economic development, the measurement costs and benefits implied by their production, distribution and consumption.

The economic copyright *fundamentals* are:

- copyright is a “private property right” which is a prerequisite for value acquiring in the market transactions; at the same time, it has some “public good” aspects being used by many users without affecting the consumption of each individual user;
- copyright is different from a means of delivery and refers only to the intellectual property, while the means of delivery is a pure private good (for example, a story is protected by copyright but is contained in a book which is a means of delivery);
- according to the law, the copyright regulates effective trade in cultural creation and balances “productive efficiency” with the “distributive one”<sup>3</sup>;
- it increases the ability of copyright holder to maximize his market position (setting the market price at a monopoly rather than at a competitive level<sup>4</sup>);
- high diversification of cultural market (different technologies, materials and investment, demand is price inelastic and income elastic, different revenues from primary and secondary markets);
- high set-up costs content and reduced marginal costs of delivery, permanent search for novelty and relatively high risk; sharing the risk between creators and the firms;
- economic effects of CIs are linked at different levels (local, regional. National, international) and stages of production, distribution and consumption of cultural goods;
- labour markets of CIs require strong creativity, innovative products and technology, high level of labour qualification etc.

<sup>3</sup> Distributive efficiency is Pareto efficiency (see Samuelson P., Nordhaus W.D., Economics, Fourteen Edition, 1992, p.729)

<sup>4</sup> This special type of monopoly is limited by copyright laws in order to avoid an indefinite period of protection

**Table 1.** Delineation of the cultural & creative sector

CIRCLES	SECTORS	SUB-SECTOR	CHARACTERISTICS
<b>CORE ARTS FIELD</b>	<b>Visual arts</b>	Crafts Painting – Sculpture - Photography	<ul style="list-style-type: none"> <li>• Non industrial activities</li> <li>• Output are prototypes and “potentially copyrighted works” (i.e. these works have a high density of creation that would be eligible to copyright but they are however not systematically copyrighted, as it is the case for most craft works, some performing arts productions and visual arts etc.)</li> </ul>
	<b>Performing arts</b>	Theatre – Dance – Circus – Festivals	
	<b>Heritage</b>	Museums – Libraries – Archaeological sites -Archives	
<b>CIRCLE 1 CULTURAL INDUSTRIES</b>	<b>Film and video</b>		<ul style="list-style-type: none"> <li>• Industrial activities aimed at massive reproduction</li> <li>• Outputs are based on copyright</li> </ul>
	<b>Television and radio</b>		
	<b>Video games</b>		
	<b>Music</b>	Recorded music market – Live music performances – revenues of collecting societies in the music sector	
	<b>Books and press</b>	Book publishing – Magazine and press publishing	
<b>CIRCLE 2: CREATIVE INDUSTRIES AND ACTIVITIES</b>	<b>Design</b>		<ul style="list-style-type: none"> <li>• Activities are not necessarily industrial and may be prototypes.</li> <li>• Although outputs are based on copyright, they may include other intellectual property inputs (trademark for instance).</li> <li>• The use of creativity (creative skills and creative people originating in the arts field of cultural industries) is essential to the performances of these non cultural sectors.</li> </ul>
	<b>Architecture</b>		
	<b>Advertising</b>		
<b>CIRCLE 3: RELATED INDUSTRIES</b>	<b>PC manufactures, MP3 player manufactures, mobile industry etc.</b>		<ul style="list-style-type: none"> <li>• This category is loose and impossible to circumscribe on the basis of clear criteria. It involves many other economic sectors that are dependent on the previous “circles”, such as ICT sector.</li> </ul>
“the cultural sector”			
“the creative sector”			

Source: The Economy of Culture in Europe, European Commission, Culture, October 2006

The special literature distinguishes *four categories of copyright-based industries* taking into consideration the role, the degree of their relationships and importance for the production, distribution and consumption of copyright works.

The most important component of CIs is represented by *Core Copyright Industries* which are “wholly engaged in creation, production and manufacturing, performance broadcast,

communication and exhibition or distribution and sales of works and other protected subject matters”<sup>5</sup>.

The Core Industries include nine subgroups according to NACE Code: press and literature; music, theatrical production, operas; motion picture and video; radio and television, photography, software and databases; visual and graphic arts; advertising services; copyright management societies.

Evolution of core industries is strongly influenced by Internet development which implies new forms of cultural works distribution and creative digital outputs.

*Interdependent copyright industries* are activities comprising functional relationships between Core Industries and related industries. They 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 subject matter”<sup>6</sup>.

The interdependent industries are including *manufacture, wholesale and retail* of: TV sets; Radio, VCRs, CD Players, DVD Players, Cassette Players; Electronic game equipment and other similar equipment; computers and equipment and musical instruments; photographic and cinematographic instruments; photocopiers; blank recording material; paper.

*Partial Copyright Industries* devote a part of their activity to works and other protected subject matter and may involve creation, production and manufacturing, performance, broadcast, communication and exhibition or distribution and sales.

Partial industries include more or less activities in: apparel, textile 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* copyright industries include groups of activities from CANE code, where a certain part is related to facilitating communications, distribution or sale of copyrighted goods and is related to *transport, wholesale and retail, telephony and Internet*.

The economic contribution of interdependent, partial and non-dedicated industries has been determined on the basis of “copyright factor” showing the proportion (weights) of a each industry attributed to copyright or the level of dependence on copyright<sup>7</sup>.

The contribution to European GDP, growth and employment is presented below (Table 2):

**Table 2.** Contribution to European GDP, growth and employment

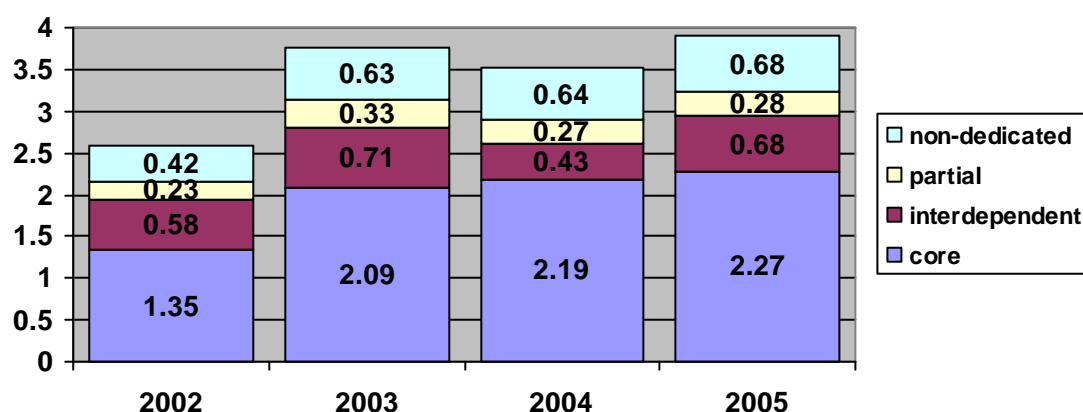
<b>Turnover</b>	➤➤➤➤	<b>The cultural &amp; creative sector generated a turnover of more than €654 billion in 2003</b>
<b>Value-added to European GDP</b>	➤➤➤➤	<b>The cultural &amp; creative sector contributed to 2.6% of the EU GDP in 2003</b>
<b>Growth</b>	➤➤➤➤	<b>The growth of the cultural &amp; creative sector in Europe from 1999 to 2003 was 12.3% higher than the growth of the general economy</b>

Source: *The Economy of Culture in Europe*, European Commission, Directorate - General for Education and Culture, October 2006, p. 61

<sup>5</sup> See *The WIPO Guide on Surveying the Economic Contribution of the Copyright Industries*, Geneva 2003, p.29

<sup>6</sup> See *The WIPO Guide on Surveying the Economic Contribution of the Copyright Industries*, Geneva 2003, p.33

<sup>7</sup> For example, copyright factors were: 0,23-0,17 for interdependent industries; 0,08-0,09 for partial industries; 0,1 for non-dedicated industries



**Fig. 1.** CIs' and their components' share in total output (%)

Source: Own calculations based on Ministry of Finance data

The contribution of CIs to total production increased from 2.58% in 2002 to 3.89% in 2005 with the highest increase recorded by core copyright industries, i.e. by those cultural industries based on artistic and scientific creativity, and considered as a growth “engine” for the whole sector (see Figure 1).

The dynamic of CIs' total output was higher than the one at the level of the entire national economy, the highest growth rates being recorded within the core-IC, partial and interdependent copyright industries.

## The Share of CIs Gross Value Added in GDP

The estimation of CIs contribution to value added in Romanian GDP was computed both for total CIs and their four components: *core-CI*, *interdependent*, *partial* and *non-dedicated support industries*, in compliance with the WIPO methodology. The absolute values of CI and its components are presented in the appendix, as in the following we shall present only relative values, i.e. the shares in GDP.

With respect to the GDP size, the gross value added was taken into account corresponding to the economic agents that filed with the Ministry of Finances their balance sheets for the years 2002-2005, and therefore we shall refer to *adjusted gross value added* as it corresponds to the respective economic agents.

The share of total CIs fluctuated throughout the period, on an increasing trend. i.e., the share increased with 1.8 pp in 2005 against 2002. On CIs components, the share of value added in GDP is different as regards intensity and type of evolution (Table 3).

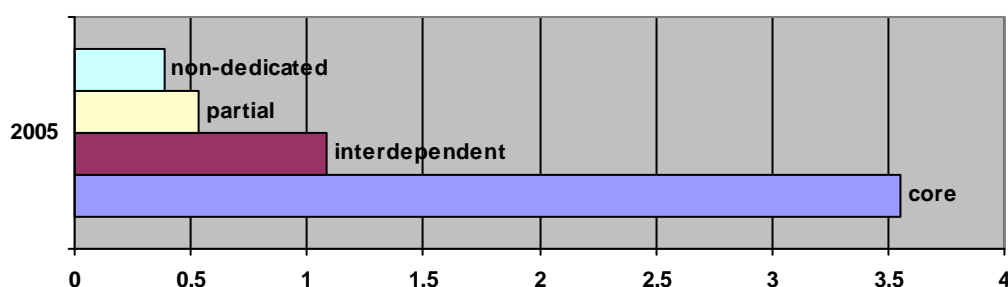
**Table 3.** Share of CI in GDP for the period 2002-2005 (%)

	2002	2003	2004	2005
<b>TOTAL COPYRIGHT BASED INDUSTRIES</b>	<b>3.75</b>	<b>5.34</b>	<b>4.59</b>	<b>5.55</b>
<b>out of which:</b>				
<b>CORE</b>	2.06	3.23	3.33	3.55
<b>INTERDEPENDENT</b>	0.96	1.09	0.37	1.08
<b>PARTIAL</b>	0.45	0.66	0.53	0.53
<b>NON-DEDICATED</b>	0.28	0.36	0.36	0.39

Source: Ministry of Finance data

The results from Table 3 reveal the following:

- Between 2002-2005, the total share of CIs in GDP increased from 3.75% to 5.54%, which proves the important role of these industries for Romania's economic development; its share being close to that of some industries such as constructions, transports or extractive industry and exceeding the one of the hotels and restaurants' activity;
- Within the component industries of CIs, the core copyright industries have the most significant contribution (3.54%) to GDP, followed by interdependent industries (1.08%) and partial industries (0.53%);
- On a trend of general increase of CIs' share in total GDP, nevertheless *variations* are recorded with respect to its size from one year to the other, rendering thus evident the "volatile" character of the activity, its income being highly sensitive to the influence and conjectures of the internal and external factors of demand and supply.



**Fig. 2.** CIs contribution to GDP by component elements in 2005

Source: Ministry of Finance data

## International Trade

The CIs represent a sector of economic, social and cultural activities strongly related with imports and exports of copyrighted goods or of goods with direct or indirect connection to copyrighted goods. In our research, the economic contribution of CIs to Romanian international trade has been analyzed by using exports' and imports' indicators (volume, dynamic and structure) for the period 2002-2005. The empirical evidence was provided by the National Institute of Statistics only for core, interdependent and partial industries, while for the non-dedicated support industries the required information could not be obtained according to the established methodology.

## Exports

Between 2002-2005, the FOB value of exports for CIs increased from 122.7 mil. Euro to 177.1 mil. Euro (i.e. of over 1.44 times), while the share in total exports was 0.84% in 2002 and 0.80% in 2005 respectively. Nevertheless, the share in total exports is relatively low, close to that of some important commodities that are specific for the Romanian export.

**Table 4.** CIs exports in 2002-2005

CIs components	Years			
	2002	2003	2004	2005
<b>Total CIs exports</b>	<b>122.7</b>	<b>147.1</b>	<b>152.3</b>	<b>177.1</b>
<b>Core</b>	23.5	43.9	36.8	52.6
<b>Interdependent</b>	57.3	59.9	69.3	73.1
<b>Partial</b>	41.9	43.3	46.2	51.4
<b>Total national exports</b>	<b>14,675.0</b>	<b>15,614.0</b>	<b>18,935.0</b>	<b>22,255.0</b>

Mil. Euro

Source: National Institute for Statistics data base (NIS)

In the period under focus, the CIs had an increasing trend. Yet, they recorded yearly fluctuations, which confirm not only the yearly production variations generated by internal factors and international conjuncture, but also the inability to maintain Romanian exports' competitiveness at a constant level.

These fluctuations are also explained by the influence of the "fashion" factor, which implies a given creativity, adjustment and absorption capacity of the Romanian economy, which in our case is translated through a modest power of Romanian companies to impose own brands on domestic and foreign markets.

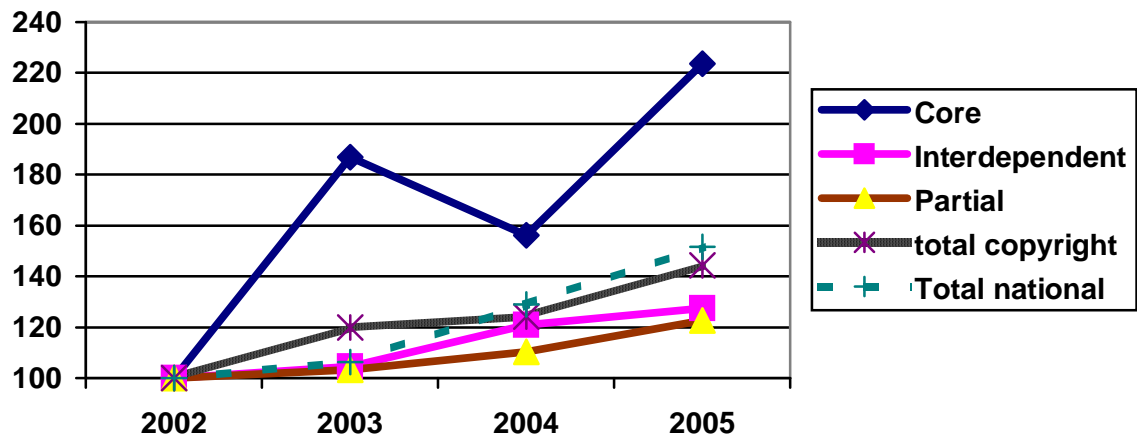


Fig. 3. The dynamic of the international trade compared to 2002 (=100)

Source: National Institute for Statistics data base (NIS)

The average yearly rate of growth of the CIs exports' in 2002-2005 was 13.0%. The core industries recorded a value of 30.78%, the interdependent industries a value of 8.45% and the partial industries a value of 7.06% respectively. The exports' increase of core industries *exceeded substantially* the national average of exports' increase, which was 14.89%.

The average yearly rate of growth of CIs exports was for the entire period with almost 2% lower than the national average, i.e. 13.01% compared to 14.89%, which leads to the conclusion that the share of CIs exports' share in total national exports had a decreasing trend.

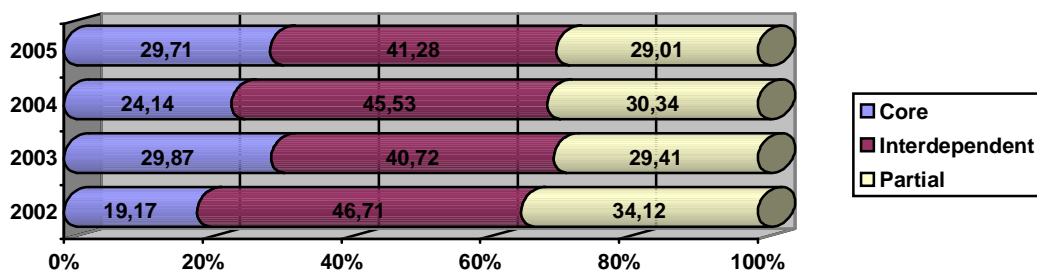


Fig. 4. The structure of exports by CIs components in 2002-2005

Source: National Institute for Statistics data base (NIS)

For the period under focus, *an increase of the share* can be noticed for core industries in total CIs' exports with 10.54% and a decrease of the share of the non-core industries, which reveals the *potential of the core industries* to increase their contribution to total national exports.

The share of copyrighted goods' exports to total national exports has varied from 0.80% to 0.90%, which represents a *modest contribution* compared to other countries, especially the developed ones.

## Imports

The imports of copyright protected goods, as well as of goods from related support industries play a very important role in the CIs specific activities. The volume, dynamics and structure of CIs' imports have been analyzed by using the same static and dynamic indicators as in the case of exports.

**Table 5.** The volume and dynamic of CIs imports

CIs Components	Years			
	2002	2003	2004	2005
<b>Total CIs</b>	<b>205.9</b>	<b>263.9</b>	<b>330.5</b>	<b>424.9</b>
<b>Core</b>	76.5	101.6	137.8	177.3
<b>Interdependent</b>	86.8	117.0	140.1	184.1
<b>Partial</b>	42.5	45.2	52.5	63.4
<b>Total national imports</b>	<b>18,881.0</b>	<b>21,201.0</b>	<b>26,281.0</b>	<b>32,568.0</b>

Mil. Euro

Source: National Institute for Statistics data base (NIS)

CIs imports doubled in the period 2002-2005. The highest increases were recorded by the core industries (over 130%) and interdependent industries (over 110%), superior to national imports increase (70%).

It is worth mentioning that the CIs imports had a *permanent increasing tendency* for all CIs' categories of products. Compared to exports, the CIs imports were more dynamic and had a steady growth, explained by the Romanian international trade liberalization, elimination of state monopoly in this field, and increase of cultural-creative goods imports' economic and social contribution.

Expressed in yearly average growth rates, the dynamic of CIs goods was the following: total CIs – 27.3%; core industries – 32.33%; interdependent industries – 28.46%; partial industries – 14.20%. Taking into account that the yearly average growth rate for the total Romanian imports was 19.93%, the CIs imports exceeded significantly the national imports in this respect.

Taking into consideration that the CIs imports were more dynamic than the CIs exports, the lag between the two indicators increased from 1.6 in 2002 to 2.4 in 2005, which led to increasing the trade balance deficit related to CIs from 83.2 mil. Euro to 247.7 mil. Euro (table 1.6). In other words, the CIs lead to an increase of the deficit of Romanian current account and trade balances.

**Table 6.** CIs' trade balance

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

Mil. Euro

Source: National Institute for Statistics data base (NIS)

The share of total CIs imports in total Romanian imports increased from 1.09% in 2002 to 1.30% in 2005. The highest contribution to this result belongs to core industries (0.54%) and interdependent industries (0.57%).



As a conclusion, it can be stated that Romania is *dependent to a large extent on CIs goods' imports*, and its volume is close to that of other important industries. In order to obtain a better situation of the trade balance, the state should promote the exports of copyrighted products, in order for their dynamics to exceed that of the imports.

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## Industria bazate pe copyright – sector important al creșterii economice în România

### Rezumat

*În acest articol se analizează contribuția economică a industriilor bazate pe copyright (IC) la produsul intern brut (PIB) al României și asupra comerțului exterior în perioada 2000-2005, folosind clasificarea și metodologia WIPO specifică acestor industrii.*

*Principalele rezultate ale acestor cercetări sunt următoarele: partea totală din PIB care revine industriilor bazate pe copyright a crescut de-a lungul perioadei analizate de la 3,75% la 5,55%; industriilor fundamentale bazate pe copyright le revine cea mai semnificativă contribuție la PIB (3,55% în 2005).*

*Valoarea exporturilor aferente IC este mult mai redusă decât cea a importurilor, deficitul comercial reprezentând o provocare pentru PIB-ul României pe termen mediu și lung.*