

**Hungarian Patent Office**

**The Economic Contribution of Copyright-Based Industries in Hungary**

**(Summary)**

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## INTRODUCTION

### 1. International surveys

Being the first researcher to study the economic aspects of copyright law in detail, it was Arnold Plant<sup>1</sup> who laid down the foundations of the economics of copyright law. In addition to theoretical arguments<sup>2</sup> addressing the relationship between copyright and economics, the studies and researches launched in the second half of the 20th century also focused on quantifying the economic contribution and significance of copyright-based industries. The **first studies** were published in Canada and Sweden in the 1970s to be followed by further research works from the USA, New Zealand, the United Kingdom, Holland, Germany, and Austria in the 1980s.<sup>3</sup> These analyses allowed for plenty of methodological considerations due to a lack of standard applicable methodology. Ever since the 1990s new countries (Finland, Japan, the MERCOSUR countries – Argentina, Brazil, Paraguay, Uruguay – and Chile)<sup>4</sup> have been arriving on the scene preparing comprehensive studies and using an increasingly integrated standardised methodology to study the economic roles of copyright based industries. The analysis of the EU countries was prepared with the coordination and under the guidance of Robert Picard, Timo Toivonen, and Mikko Grönlund in 2003.<sup>5</sup> Consistently adopting the methodology defined by the World Intellectual Property Organization (WIPO), the Singapore, Canada, and USA reports were published in 2004, as well as the Latvian report<sup>6</sup> in early 2005, prepared by renowned experts like Robert Picard and Timo Toivonen. Out of the industrialized countries the USA, Finland, and Holland regularly publish reports<sup>7</sup> on the economic significance of copyright based industries, their contribution to the national GDP, and economic growth.

WIPO issued a methodological guide in 2003 with a view to revealing the economic contribution of copyright based industries under the title of “Guide on Surveying the Economic Contribution of the Copyright-Based Industries”.<sup>8</sup> 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. This is one of the many reasons why

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<sup>1</sup> Arnold Plant: *The Economic Aspects of Copyright in Books*, *Economica*, 1., 1934, pp. 167-195

<sup>2</sup> Including but not limited to: W. Landes – R. Posner : *An Economic Analysis of Copyright Law*. *Journal of Legal Studies*. 1989. Vol: 18, pp. 325-363.; Richard Watt: *Copyright and Economic Theory: Friends or Foes?* Edward Elgar. 2000.

<sup>3</sup> Marlies Hummel: *The economic importance of copyright*. *Copyright Bulletin*. 1990. Vol. 24. No. 2 pp. 14-22., Fritz Scheuh–Hartmut Holzmüller: *Die wirtschaftliche Bedeutung des Urheberrechts in Österreich*. Orac, Wien, 1989.; *The economic importance of copyright*. Common Law Institute of Intellectual Property. London. 1993.

<sup>4</sup> Copyright White Paper. Japan Copyright Institute. 2001.; *Economic importance of copyright industries in Finland*. Finnish Copyright Industries in 1997. Finnish Copyright Society. Helsinki 2002.; *Norwegian Copyright Industries in 1999*. Finnish Copyright Society and Finnish Copyright Institute. Helsinki 2002.; *Estudio sobre la importancia de las industrias y actividades protegidas por el derecho de autor y los derechos conexos en los países de MERCOSUR y Chile*. UNICAMP, OMPI.; *Economic Contributions of Singapore’s creative industries*. *Economic Survey of Singapore*. First Quarter 2003. pp. 51-75.

<sup>5</sup> *The Contribution of Copyright and Related Rights to the European Economy*. The report was conducted and written by Robert G. Picard, Timo E. Toivonen, Mikko Grönlund. 20 October 2003.

<sup>6</sup> Leo Kah Mun-Chow Kit Boey-Lee Kee Beng-Ong Chin Huat-Loy Wee Loon: *Economic Contribution of Copyright-based Industries in Singapore*, 2004. October. IP Academy, Singapore., *The Economic Contribution of Copyright Industries to the Canadian Economy* ([www.pch.gc.ca/progs/ac-ca/progs/](http://www.pch.gc.ca/progs/ac-ca/progs/)), Robert G. Picard–Timo E. Toivonen: *The Economic Contribution of Copyright-based Industries in Latvia 2000.*, Ministry of Culture of Republic of Latvia, 2005.

<sup>7</sup> Stephen E. Siwek: *Copyright industries in the US. Economy. The 2002. report.*;

<sup>8</sup> *Guide on Surveying the Economic Contribution of the Copyright-Based Industries*. WIPO.

WIPO encourages research projects aimed to studying the economic roles of copyright based industries.

In cooperation with the Finnish government, WIPO established a **Working Group** with a view to defining and determining a methodological guide in 2002 in order to study the economic contribution of copyright based industries.

The preparation of the **WIPO methodological guide** called for the need for international comparison. Earlier studies had limited possibilities to present and analyse the economic contribution of copyright based industries in international comparison because of the different terminology, the differing statistical data, and national legal regulations. The WIPO methodological guide is designed to eliminate conceptual and methodological differences and helps make international comparisons. Based on the guide the countries use a standard method and the same statistical figures to calculate the same indicators (statistical indexes), which are now comparable with the data of other countries.

WIPO's methodological guide had a **threefold purpose** :

1. summing up the existing experiences in the surveying of copyright based industries;
2. development of a practical analytical instrument for future surveys to serve as a guideline and define recommendations;
3. laying down common basic statistical methodologies for the comparison of future surveys with the results of previous researches.

WIPO invited **Hungary** to participate in this pioneering project in the East Central European region in acknowledgment of her internationally-acclaimed statistical system, the internationally-recognised experts in copyright, the extensive cultural statistics and, last but not least, for her internationally-acclaimed contribution to creative art.

In addition to WIPO, the **European Union** is paying increased attention to the economic significance of copyright based industries. This is underlined by the fact that in 2003 a report on the economic contribution and significance of copyright based industries was commissioned by the European Commission's Internal Market Directorate-General. The study, which is based on the WIPO-established methodology, shows the contribution of core copyright industries and copyright-dependent industries<sup>9</sup> to GDP in the EU-15 members on aggregate as well as in a country breakdown in the year 2000. It also shows the number of employees working in the sector and their productivity.<sup>10</sup>

## 2. Research objective, backgrounds

In 2004 the Hungarian Patent Office (HPO) endeavoured to be the first in Central Eastern Europe<sup>11</sup> to conduct a survey on the economic contribution of copyright based industries using the methodology developed and recommended by WIPO.

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<sup>9</sup> Exact definition given in chapter III.

<sup>10</sup> The Contribution of Copyright and Related Rights to the European Economy. Prepared by: Robert G. Picard, Timo E. Toivonen, Mikko Grönlund. 20 October 2003.

<sup>11</sup> In addition to Hungary a similar study was prepared by Finnish researchers on Latvia in 2004.

The President of the HPO's advisory board, the Hungarian Council for the Protection of Intellectual Property discussed and approved the objectives of the research in March 2004, which provided the foundations for the prospective work.<sup>12</sup>

The **main objective** of the research was to **present the economic contribution, performance, and economic role of copyright based industries in the national economy of Hungary using the WIPO methodological guide**. Accordingly, the Hungarian analysis follows the statistical method recommended by the methodological guide,<sup>13</sup> and calculates the indicators recommended therein, trying to adapt to the Hungarian statistical data collection system as much as possible.

Supplementing and going beyond the thematics recommended by WIPO, the Hungarian survey **presents the development trends and structural characteristics of the key primary copyright based industries** by means of cultural statistics and researching the available academic literature. This is intended to make the overall picture provided by the macroeconomic analysis more detailed.

WIPO provided professional advice on the implementation of the Hungarian project; the internationally-acclaimed American economist, Mr. Stephen E. Siwek, had personally contributed to the success of the Hungarian survey by sharing his vast experience in methodology.

On 19-20 October 2004 a **WIPO-HPO joint seminar** was held in the HPO with the participation of WIPO-delegated experts, Stephen E. Siwek and Dimiter Ganchev, key figures in the Hungarian copyright law profession, and members of the HPO working group. The seminar addressed issues like the present research experiences on the economic role of copyright industries, and the unresolved questions of adapting the international methodology that was to provide the backbone of the Hungarian survey.<sup>14</sup>

In 2004 the HPO entered into an agreement with the **Hungarian Central Statistical Office (HCSO)** with a view to adapting the WIPO analysis method in Hungary. As a first step, the HCSO compiled and made the necessary statistical data available for the project.

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<sup>12</sup> The economic contribution of copyright-based industries in Hungary. (Compiled by: Penyigey, Krisztina-Munkácsi, Péter-Vadász, Ágnes) HPO; 2004. Bp.

<sup>13</sup> The methodology of the Hungarian analysis was elaborated jointly by the members of the Hungarian Patent Office and the experts of the Hungarian Central Statistical Office.

<sup>14</sup> Information concerning the study on the "Economic contribution of copyright-based industries in Hungary". HPO. 2004.

## TYPES OF COPYRIGHT BASED INDUSTRIES

### 1. Copyright based industries

The methodological guide published by WIPO distinguishes the following **four main categories of copyright based industries** depending on the type of association to copyright. They are:

- I. core copyright industries
- II. interdependent copyright industries or copyright-dependent industries or copyright-hardware
- III. partial copyright industries
- IV. non-dedicated support industries

**I. Core copyright industries** or primer copyright industries include sectors that are fully engaged in the creation, production and manufacturing, performance, broadcasting, communication and exhibition or distribution and sale of works and other creations under the scope of copyright. Core or primer copyright industries are defined areas in economy whose activities are based on creations protected by copyright and neighbouring rights. Consequently, the existence of these industries depends largely on copyrighted creations. These industries make up the core of copyright based industries and their activities in them are almost exclusively associated with creations protected by copyright. For this reason the full activities and performance of these industries must be taken into consideration when trying to establish the economic contribution of copyright industries.

The following industries fall into this particular category:

- press and literature,
- music, theatrical productions, opera,
- motion pictures and video,
- radio and television,
- photography,
- software and databases,
- visual and graphic arts,
- advertising,
- copyright collective management societies.

The core copyright industries primarily include the cultural sphere and the software industry.

**II. The interdependent copyright industries or copyright-dependent industries or copyright-hardware** include industries that are engaged in production, manufacturing and sale of devices and equipment which are wholly or primarily responsible for the promotion of creation, production and utilisation, “consumption” of works under copyright protection. These industries produce devices or hardware that is used for the creation, production, distribution, “consumption” of the creations, works. These hardware devices can also be used

for the creation, or “consumption” of objects not under the protection of copyright. Examples include televisions, cameras, or the computers.

The interdependent copyright industries may be divided into two larger groups depending on the nature of their relationship to core copyright industries<sup>15</sup>:

- industries depending on core copyright industries
- industries depending on partial copyright industries

Industries in the former group produce goods which consumers use together with the output of core copyright industries. The second group includes industries that produce goods that are needed to provide base materials of the respective copyright industry.

The following industries come under the first group of interdependent copyright industries:

- Manufacture, wholesale and retail of TV sets, radios, VCRs, CD players, DVD players, cassette players, electronic game equipment, and other similar equipment,
- Manufacture, wholesale and retail (sales and rental) of computers and equipment,
- Manufacture, wholesale and retail (sales and rental) of musical instruments,

The following industries belong to the second group of interdependent copyright industries:

- Manufacture, wholesale and retail (sales and rental) of photographic and cinematographic instruments,
- Manufacture, wholesale and retail (sales and rental) of photocopiers,
- Manufacture, wholesale and retail of blank recording material,
- Manufacture, wholesale and retail of paper.

**III. Partial copyright industries** include industries that are only partially engaged in production of copyright protected creations. Only a specific proportion, a defined percentage of the production of these industries is associated with products protected by copyright and related laws. The so-called copyright factor is an indicator of the percentage ratio, which shows what percentage of the production of the industry is under the protection of copyright<sup>16</sup>.

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,

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<sup>15</sup> The distinction of the two interdependent copyright industries was based on the Latvian report prepared by the Finnish experts (Robert G. Picard–Timo E. Toivonen: The Economic Contribution of Copyright-based Industries in Latvia 2000. p. 11.).

<sup>16</sup> The values and the methodology of determining the copyright factors used in the Hungarian survey are outlined in the following chapter.

- museums.

**IV. Non-dedicated support industries** are industries in which a portion of the activities is facilitating broadcast, communication, distribution and sale of products and works and other protected subject matter.

The following industries come under this category:

- general wholesale and retailing,
- general transportation,
- telephony and Internet.

The following table summarises all the copyright based industries included in the Hungarian survey. The industries were determined according to the WIPO guide but also taking into account the specifics of the Hungarian statistical system.

# Copyright-Based industries in Hungary<sup>1</sup>

(The categories used by the Hungarian survey)

I. Core copyright industries	II. Interdependent copyright industries <sup>2</sup>	III. Partial copyright industries	IV. Non-dedicated support industries
Press and literature	Television and radio sets, <i>etc.</i>	Apparel, textiles and footwear	General wholesale and retailing
Music, theatrical productions, opera	Computers and equipment	Jewelry and coins	General transportation, storage and communication
Motion pictures and video	Musical instruments	Other crafts	
Radio and television	Photographic and cinematographic instruments	Furniture	
Photography	Photocopiers	Household goods, china and glass	
Software and databases	Blank recording material	Wall coverings and carpets	
Advertising	Paper	Toys and computer games	
Professional Organisations		Architecture, engineering, surveying	
		Museums	
	(Wholesale and retail, and rental of interdependent copyright industries)	(Wholesale and retail of partial copyright industries)	

<sup>1</sup> The Hungarian adaptation of the WIPO “Guide on Surveying the Economic Contribution of the Copyright-Based Industries”.

<sup>2</sup> Based on the basic data, the wholesale and retail, and rental of interdependent copyright industries and the wholesale and retail of partial copyright industries are shown in separately. During the adjustment of data wholesale and retail, and rental was divided among the specific activities. As a result, the data already contains the manufacture, wholesale and retail and rental of products in this category.

## 2. Copyright factor

The so-called **copyright factor** is a percentage ratio expressing the share of copyright activities in a given industry, i.e. the figure indicates the extent of dependence of the product of the given industry on copyright. In the calculations recommended by the WIPO guide the copyright factor is used as a weight, which – depending on the industry – may take a value between 0 and 1. Industries that only produce products and works and other protected subject matter have a copyright factor value of 1 whereas industries having nothing to do with copyright have a copyright factor value of 0.

By multiplying the added value, output, and the number of employees by the copyright factor of the industry studied, we arrive at the added value, output and the number of employees of copyright based activities. This way we can accurately determine the significance of copyright based industries in the national economy and employment figures.<sup>17</sup>

All the products created by the core copyright industries are protected by copyright; in this case the copyright factor value is 1, similarly to the interdependent copyright industries. The larger share of the partial copyright industries and the non-dedicated support industries has no relation to copyright at all. Only a small fraction of the products produced by partial copyright industries are protected; the percentage figure is expressed by the value of the copyright factor. For example, it is estimated that only a very small fraction (0.5%) of added value is generated by textiles, leather goods, and footwear can be considered protected subject matter, therefore the value of the copyright factor is 0.005.

As for the non-dedicated support industries, we used the calculation method applied by the American survey<sup>18</sup> to establish the copyright factor of general wholesale and retailing, general transportation, and communication. We based everything on the presumption that the weight represented by the copyright based activities in the support, distribution industries corresponded with the ratio of copyright based industries (core copyright industries, interdependent copyright industries, partial copyright industries) to the GDP. As for non-dedicated support industries the value of the copyright factor in 2002 in Hungary was 0.057.

When determining the copyright factors in the Hungarian survey, we benefited all previous analyses on the economic contribution of copyright based industries and relied heavily on the copyright factors applied primarily by the US, Singapore and Latvian studies. We also took into consideration the regulations of copyright law, the structure of the industry, the extent of aggregation of the available statistical data, and expert estimation<sup>19</sup>.

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<sup>17</sup> The figures adjusted by the copyright factor are shown in the Appendix.

<sup>18</sup> Stephen E. Siwek-Harold W. Furchtgott-Roth: Copyright Industries in the U. S. Economy. November 1990. Appendix B.

<sup>19</sup> As for the partial copyright industries, the data required and supplied by the HCSO did not contain items that have no relationship with copyright. This way, for example, the figures on textile industry do not contain any information on protective and working gear. This can also be interpreted that in this case the copyright factor was 0 and the multiplication of output by zero will produce zero.

# THE CONTRIBUTION OF COPYRIGHT BASED INDUSTRIES IN THE HUNGARIAN ECONOMY

## 1. The performance of copyright based industries

Based on the value of their economic performance, and the number of employees, the contribution of copyright based industries was **quite significant to the Hungarian economy** in 2002. The total **gross added value of copyright based industries** came to HUF 987 billion<sup>20</sup>, which represented **6.67%** of the total gross national economic added value. Within copyright based industries the **gross added value** of core copyright industries amounted to HUF 586 billion in 2002, which accounted for **3.96%** of the national GDP.

The **total contribution of copyright based industries to gross output** was HUF 3,412 billion, which represented **9.68%** of national economic output. Within this figure, the **contribution of core copyright industries** came to HUF 391 billion, which represented **3.95%** of gross national output.

**Total volume of employee incomes within the entire copyright based sector** was HUF 552 billion amounting to **7.17%** of the whole national economic value. Within this figure, the **employee incomes in core copyright industries** amounted to HUF 325 billion – **4.22%** of national employee incomes.

**The total number of people employed in the copyright sector** was 278 thousand, which is **7.10%** of total employment. Within this figure, employee numbers in **core copyright industries** in 2002 was 162,575 people, which accounted for **4.15%** of total employment.

To sum up we can safely state that all copyright based industries, i.e. the **entire copyright industry, accounted for 7-9% of total economic output**, while **core copyright activities** accounted for **4%** on average of the Hungarian national economic performance.

Within copyright based industries, the **contribution of core copyright industries is the highest**. Based on their contribution to GDP, core copyright industries generate nearly 60% of the total added value of all copyright based industries while the remaining copyright based industries collectively account for 40% of GDP. The economic significance of core copyright industries is similar when we look at employee numbers or employee incomes.<sup>21</sup>

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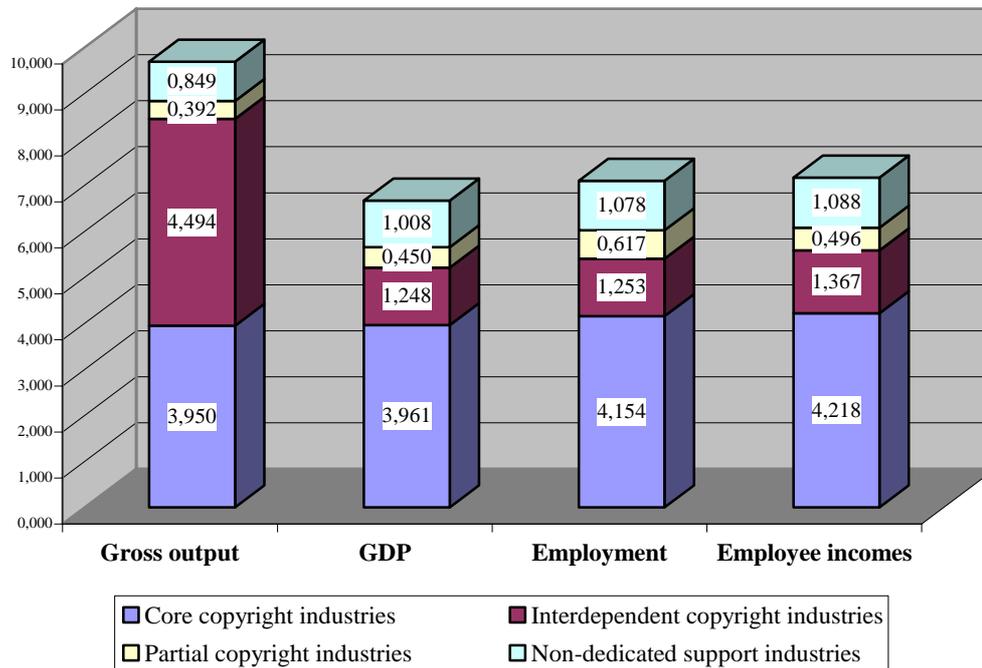
<sup>20</sup> The yearly average exchange rates between USD and HUF were 1 USD=286.54 HUF in 2001; 258.00 HUF in 2002; 224.44 HUF in 2003; 202.63 HUF in 2004.

<sup>21</sup> Core copyright-based industries account for 40% of total gross output of copyright-based sector. These ratios are largely explained by the peculiar, Hungarian development of interdependent copyright industries, which is outlined in greater detail in section 4 of chapter V.

**The Economic Contribution of Copyright-Based Industries in Hungary in 2002 (HUF million, %)**

	<b>GDP</b>		<b>Gross output</b>		<b>Employee incomes</b>		<b>Employee numbers</b>	
	million HUF	%	million HUF	%	million HUF	%	people	%
<b>I. Core copyright industries (CORE)</b>	586,571	3.961	1,391,892	3.950	325,208	4.218	162,575	4.154
<b>II. Interdependent copyright industries (INTERDEPENDENT)</b>	184,841	1.248	1,583,538	4.494	105,391	1.367	49,029	1.253
<b>III. Partial copyright industries (PARTIAL)</b>	66,687	0.450	138,077	0.392	38,251	0.496	24,168	0.617
<b>IV. Non-dedicated support industries (NON-DEDICATED SUPPORT)</b>	149,334	1.008	299,039	0.849	83,872	1.088	42,200	1.078
<b>I-IV. COPYRIGHT BASED INDUSTRIES TOTAL</b>	<b>987,433</b>	<b>6.668</b>	<b>3,412,546</b>	<b>9.684</b>	<b>552,763</b>	<b>7.169</b>	<b>277,972</b>	<b>7.102</b>
<b>NATIONAL ECONOMY TOTAL</b>	14,807,634	100.000	35,239,550	100.000	7,710,098	100.000	3,914,163	100.000

## The economic contribution of copyright based industries in Hungary in 2002 (%)

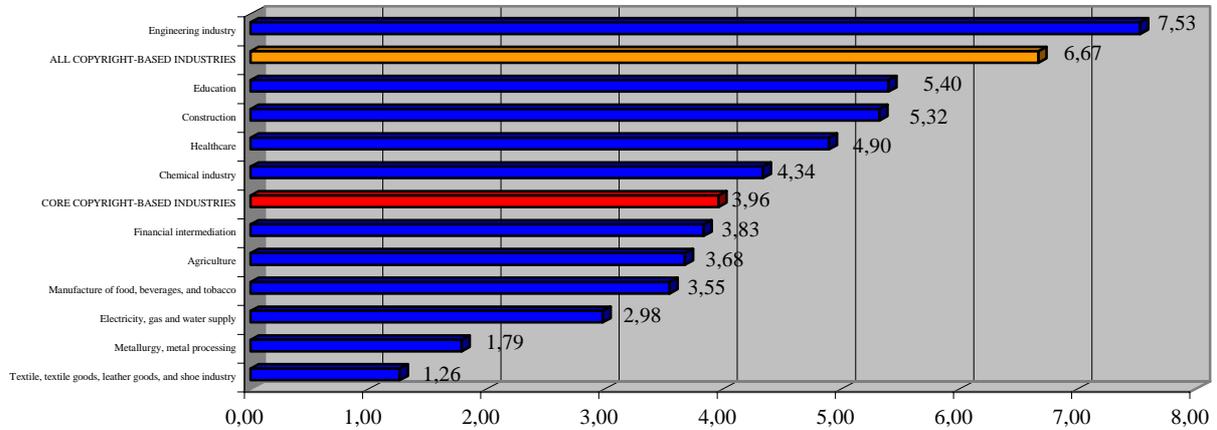


## 2. Comparison with other economic sectors

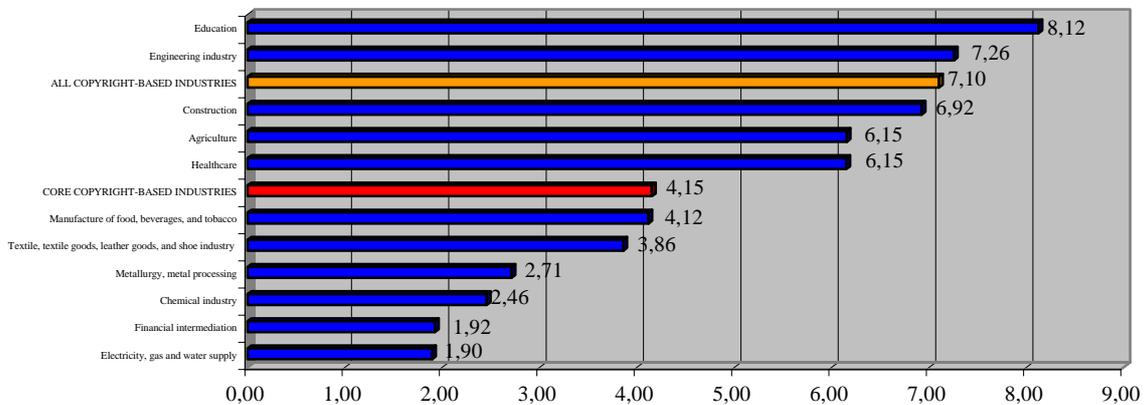
The role of copyright based industries in economic performance and employment in Hungary is easily illustrated by comparison with the other sectors and industries of the national economy. The contribution of copyright based industries/activities to gross added value and employment statistics in the national economy is not unlike that of large industries with a significant economic contribution. The 6.67% contribution of all copyright based industries to GDP with 3.96% produced by core copyright industries alone is comparable with the performance of economic industries like the engineering industry (7.53 %), the chemical industry (4.43 %), and the building industry (5.32 %). **The gross added value generated by core copyright industries is higher than that produced by the textile industry (1.26 %), metallurgy and metal processing (1.79 %), electricity industry (2.98 %), the food industry (3.55 %), and agriculture (3.68 %).**

The entire copyright based sector employed 283,000 people, which is 7.1% of total employment. Within this in particular core copyright industries employed 162,000 people in 2002, accounting for 4.15% of total employment. The collective contribution of all copyright based industries to employment is equivalent to that of the engineering industry (7.26 %), the building industry (6.92 %), agriculture (6.15 %), and healthcare (6.15 %). Core copyright industries employ nearly as many people as the food industry (4.12 %). **The number of employees in core copyright industries was higher than that of the textile industry (3.86 %), metallurgy and metal processing (2.71 %), the chemical industry (2.46 %), and the electricity industry (1.90 %).**

**The contribution of copyright based industries in the Hungarian economy in 2002  
in comparison with other sectors on the basis of their contribution to GDP (%)**

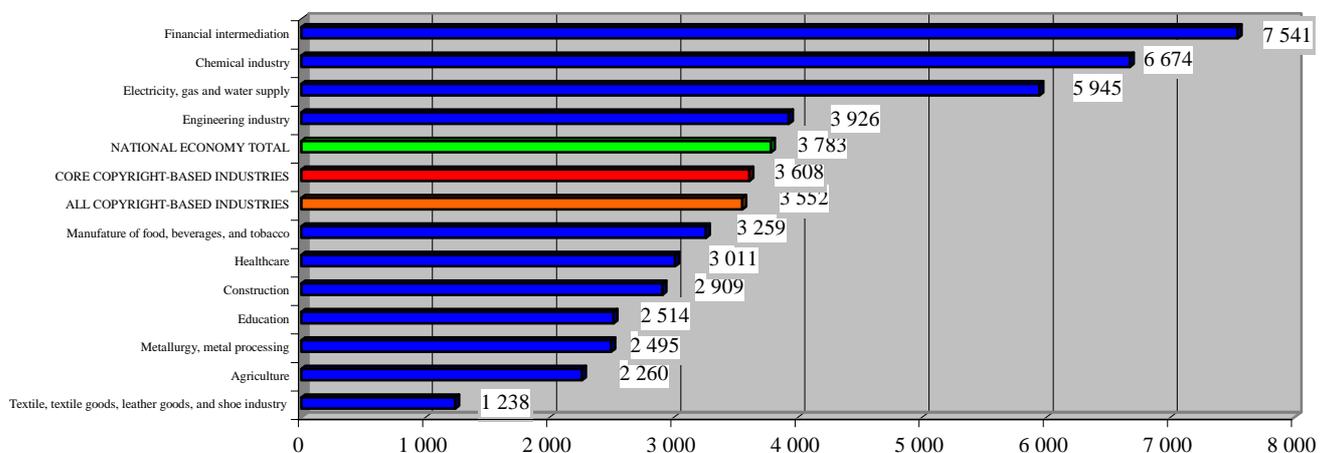


**The contribution of copyright based industries in the Hungarian economy in 2002  
in comparison with other sectors on the basis of their contribution to employment  
(%)**



In 2002 in the copyright based industries – core copyright industries and the overall total of copyright based industries – the **productivity index** expressed as the fraction of added value per employee was very **close** to the **national economic average**. The productivity index of core copyright industries came to HUF 3,608,000, while that of the entire copyright industry was HUF 3,552,000, and the average of the national economy amounted to HUF 3,783,000. Only the traditional industrial sectors like the engineering industry, the chemical industry, and the electricity industry succeeded in producing better performances than the copyright based industries. The food industry, the building industry, metallurgy, metal processing, the textile industry, and agriculture had all performed less well than the copyright based industries.

### The productivity of copyright based industries (gross added value per employee) in comparison with other sectors in 2002 (HUF ths)



### 3. The economic contribution of core copyright industries

Core copyright industries include industries/activities engaged in creation, production and manufacturing performances, broadcasting and communication, exhibition, or distribution and sale of products and works and other protected subject matter. Core copyright industries, in fact, cover the entire field of culture in the traditional sense of the word and the software industry.

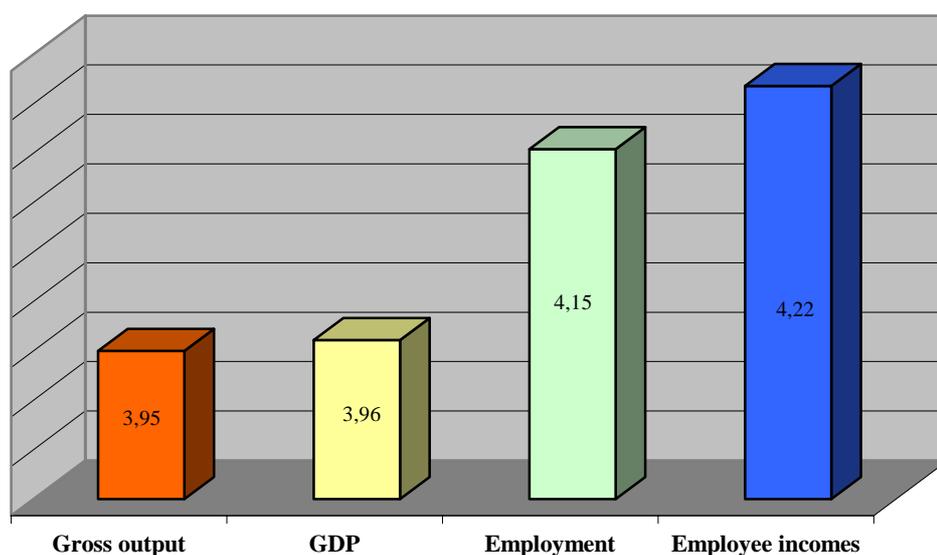
**The economic performance of core copyright industries is approximately 4% of the entire national economy.** The gross output of core copyright industries in 2002 was HUF 1,391 billion. This segment accounted for 3.95% of the gross economic output. The gross added value generated by core copyright industries was HUF 586 billion – 3.96% of the total gross added value produced by the entire national economy. In 2002 162,000 employees were engaged in these industries, which accounted for 4.15% of the total employment. Employee incomes amounted to HUF 325 billion accounting for 4.22% of total employee incomes.

The contribution of core copyright industries to **employment and to employee incomes is higher than its contribution to national economic gross added value, or gross output.** This phenomenon contradicts the trends observed in industrialized countries and it is a

reflection on the fact the core copyright industries in Hungary use a larger labour force than the average industry. This loss in productivity is probably due to the lower level of mechanisation and automation of the core copyright industries in international comparisons, and the slow establishment of new, labour-saving technologies because of lack of finances.

When we take the average of the EU-15 and each of the old member states separately, we find that the contribution of core copyright industries to employment is lower than its contribution to GDP. In the country comparisons we find only 6 countries – Denmark, Finland, Greece, Latvia, Singapore, and Hungary – where the contribution of core copyright industries to employment is greater than its role in shaping the GDP.

### The economic contribution of core copyright industries (CORE) in Hungary in 2002 (%)



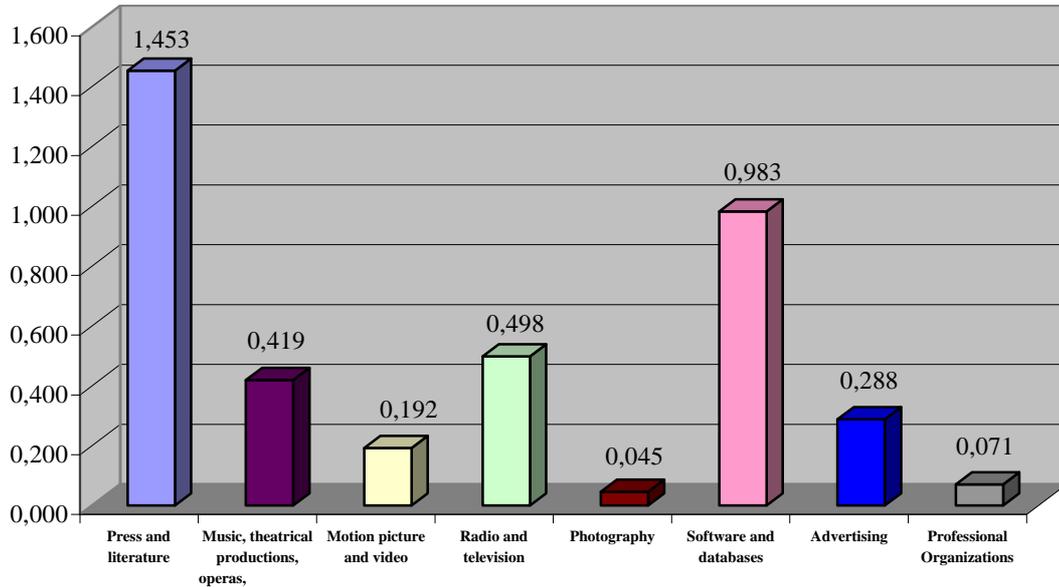
The following core copyright industries were the most important in terms of their **contribution to gross output** in 2002 in the order of their contribution: press and literature, software and databases, radio and television, music, theatrical productions, opera, and advertising. These five activities accounted for 92% of the total gross output of core copyright industries. Motion pictures and video, photography and professional organisations<sup>22</sup> made up the remaining 8%.

The heavy **concentration** of core copyright industries is shown by the fact that 61% of gross output of core copyright industries came from two areas: press and literature, and software and databases. The traditionally strong Hungarian press and literature sector has a long history while the software industry is a relatively young, but fast-developing industry. This explains

<sup>22</sup> Since 2003, seven registered organisations concerned with collective administration of copyrights and related rights operate in Hungary: ARTISJUS - Society Hungarian Bureau for the Protection of Author's Rights; HUNGART - Society of Visual Artists Performing Collective Administration of Rights; FILMJUS - Hungarian Society for the Protection of Audio-Visual Authors' and Producers' Rights; EJI - Association of Arts Unions Bureau for the Protection of Performers' Rights; MAHASZ - Association of Hungarian Record Companies (Hungarian Group of IFPI); RSZ - Hungarian Alliance of Reprographic Rights; MASZRE - Reprographic Society of the Hungarian Book and Periodical Writers and Publishers)

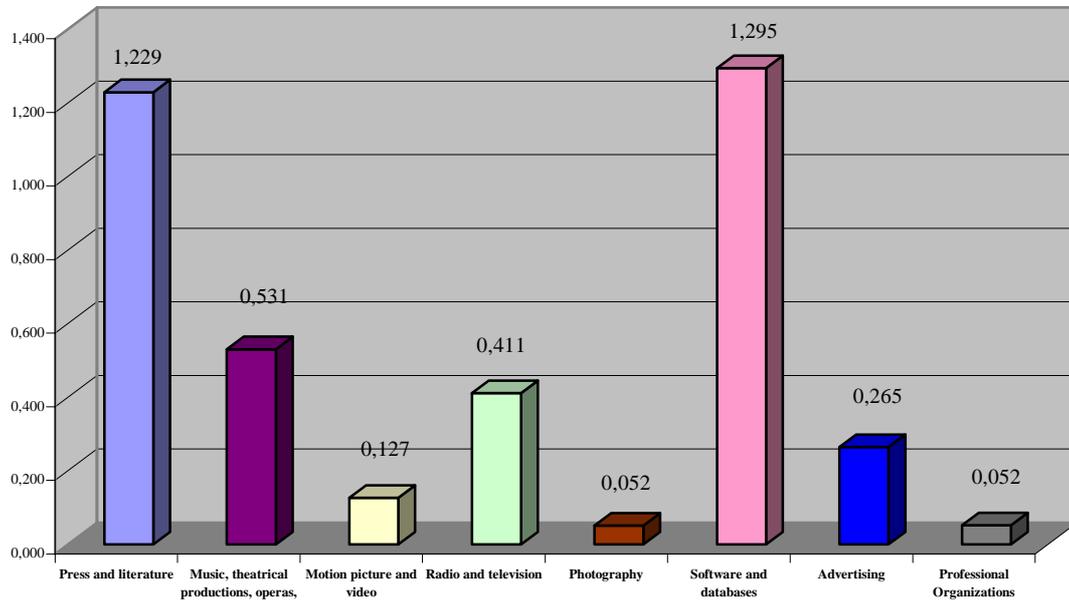
the dominance of these two sectors with different pasts and traditions within the core copyright industries.

**The weight of core copyright industries on the basis of gross output in 2002 (%)**



Of the core copyright industries, the five strongest areas in terms of **contribution to GDP** are the same as those that make the greatest contribution to gross output; they are: software and databases, press and literature, music, theatrical productions, opera, radio and television, and advertising.

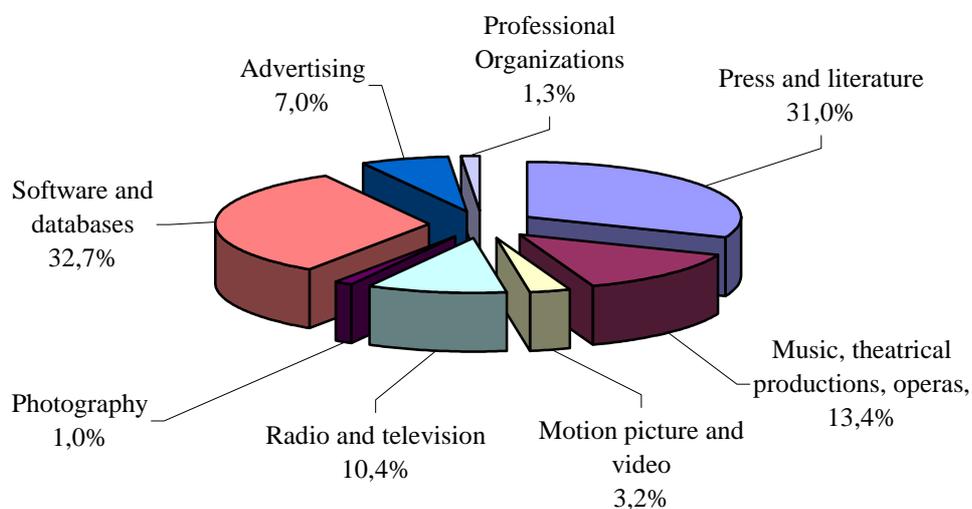
### The contribution of core copyright industries to GDP in Hungary in 2002 (%)



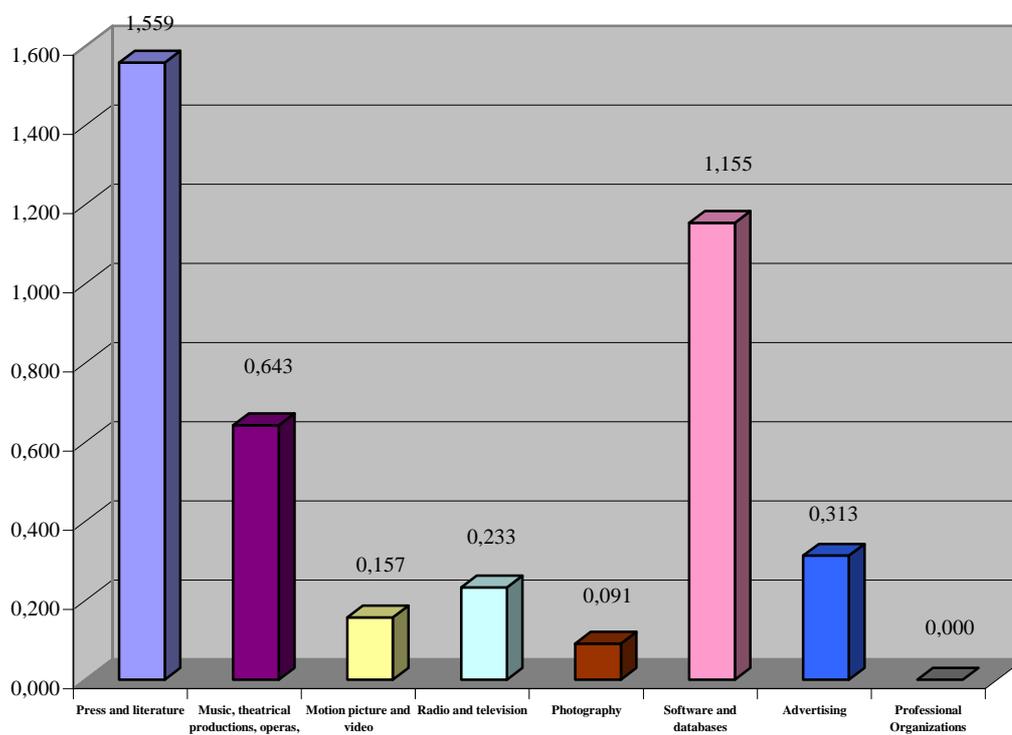
Ninety-five percent of the gross added value produced by core copyright industries came from the above five areas of activity. What is more, **two areas – software and databases, and press and literature – accounted for 65% (nearly two-thirds) of the gross added value.** Therefore contribution to gross added value was even more strongly concentrated than contribution to gross output.

The difference in the rankings based on the contributions to gross output and gross added value can be explained by the different material demands, intellectual and outside labour intensity in the specific core copyright industries. The greatest contribution of press and literature to gross output is due to its relatively greater material intensity than that of software and databases. As for radio and television, productions are predominantly made with the engagement of outside production companies, which is also reflected in the higher contribution to gross output since the value of gross output – given that all conditions are unchanged – is directly proportional to the increase in the division of labour.

### The structure of core copyright industries in 2002 according to GDP (%)



### The contribution of core copyright industries to employment in Hungary in 2002 (%)



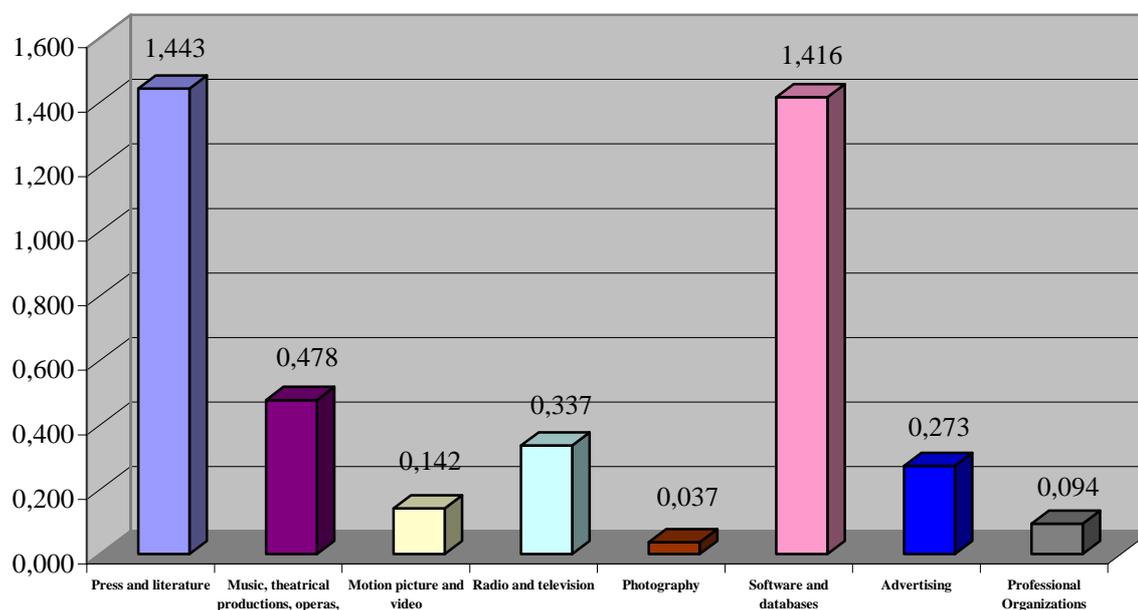
The ranking of core copyright industries in terms of their contribution to **employment** (workforce-intensity) is as follows: press and literature, software and databases, music, theatrical productions, opera, advertising, and radio and television. It transpires that press and literature swapped places with software and databases; advertising came before radio and television. This is closely related to the labour-intensity of the given activity.

The number of employees engaged in press and literature in 2002 was 61,000, in software and databases the figure was 45,000, in music, theatrical productions, opera it was 25 thousand. Advertising provided jobs to 12,000 people, and radio and television employed 9,000.

Ninety-four percent of all employees engaged in different areas of core copyright industries are employed in five fields of activity; 65% are engaged in the two areas as mentioned above: in press and literature, and software and databases. The proportion of employees in press and literature is the highest followed by software and databases, and music, theatrical productions, opera. In comparison to gross added value, and gross output radio and television as well as advertising make a smaller contribution to employment, which is likely to be related to the peculiarities of the division of labour.

With regards to **contribution to employee incomes** of the core copyright industries, the five strongest areas are as follows in order of importance: press and literature, software and databases, music, theatrical productions, opera, radio and television, and advertising.

**The contribution of core copyright industries to employee incomes in 2002 (%)**

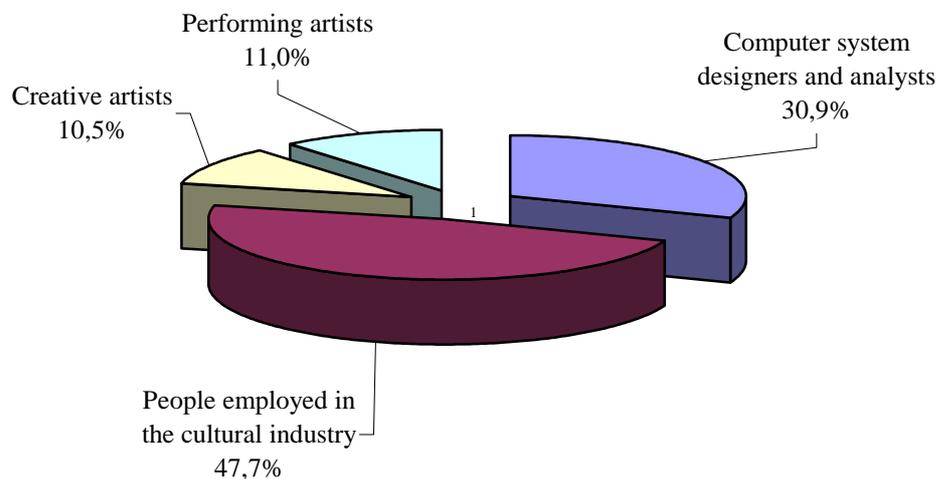


These five activities accounted for 86% of all employee incomes. The heavy concentration of employee incomes is further demonstrated by the fact that more than two-thirds of incomes come from only two areas: press and literature, and software and databases.

In the **2001 census** 3,690 people claimed to be running one-man enterprises<sup>23</sup>. This survey does not encompass the total number of employees employed by the copyright industries, but only those that are directly engaged in cultural or certain IT activities. Other services related to copyright industries (e.g. ushers in theatres) are not included in the classification. For the purposes of this survey therefore we do not focus on absolute numbers, but rather on the composition of employment.

Out of the survey subjects 87,000 people to be engaged in core copyright industrial activities. 47.7% of these were involved in cultural activities: 30.9% worked in IT, while 21.5% claimed to be creative or performing artist.

**The distribution of employees engaged in the core copyright industries in the breakdown of occupational categories in 2001 (%)**



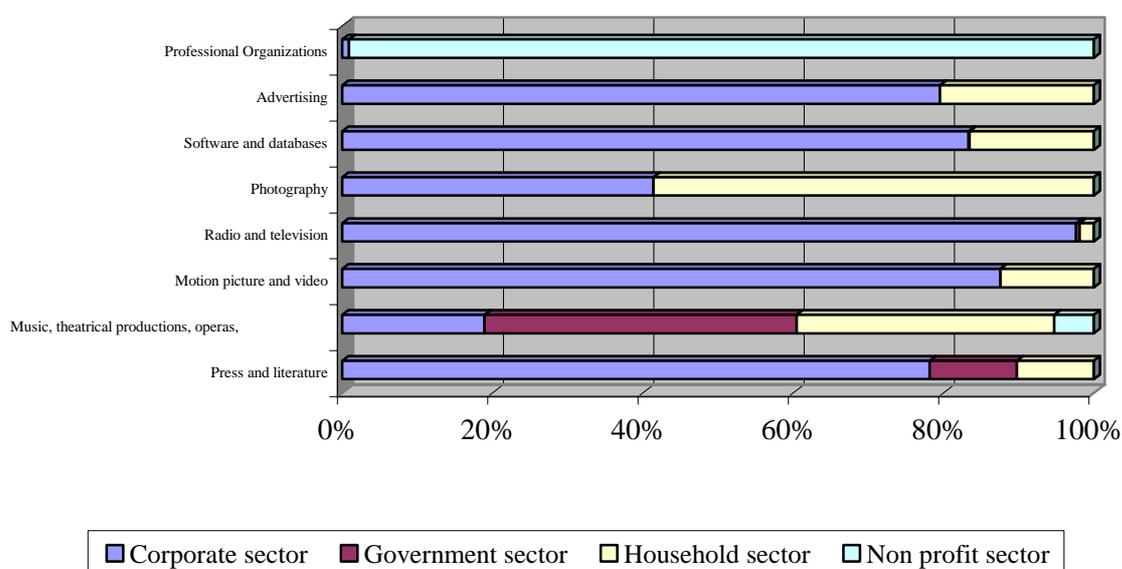
We looked at the composition of employees engaged in **copyright based industries**. In the core copyright industries, the top two ranks were occupied by other computer associate professionals (9,382) and software designers and IT experts (8,171 making a total of 17,553). They are followed by other culture-related professionals (7,167), and librarians (5,966). Fifth place was occupied by journalists (4,303), followed by industrial designers (3,500). The top ten copyright based occupations account for 57.7% of employees engaged in core copyright industries.

Once possession of the available statistical figures we looked at the **composition** of core copyright industries/activities by **sectors**. According to the Hungarian statistical survey

<sup>23</sup> Following the tradition of census surveys in Hungary, the 2001 census was also conducted by personal questioning of the population and completion of a questionnaire; the data need not be verified by documents. For this reason the data of the census may differ from the results of data collection where data had to be verified. The information on the occupations of the working population is published in compliance with the revised FEOR-93 system effective from 1997. The number surveyed amounted to 95% of the 2001 employment figures.

system, the corporate sector includes all enterprises with legal person status and economic organisations without legal person status. The activities of central and local government funded institutions and state allocated funds under the budget directives are classified under the government sector. Households, and the small enterprises falling under the scope of the personal income tax law are shown in the household sector. Non-profit organisations assisting households are institutions whose resources are primarily supplied by private financiers.

### The structure of core copyright industries by sectors in the breakdown of gross added values in 2002 (%)



In the **majority of core copyright industries the corporate sector plays a key role**. More than three-quarters of gross added value is generated in the corporate sector by press and literature, motion pictures and video, software and databases, and advertising. Accordingly, employees in the fields of motion pictures and video, photography, radio and television, software and databases, advertising, and professional organisations are represented almost exclusively by partnerships and one-man enterprises.

The **government sector dominates only music, theatrical productions, opera**. The maintenance of theatres and music halls and related institutions is mainly funded by state resources. In the field of music, theatrical productions and opera, 41% of gross added value was generated by institutions owned and run by the central and local governments. In addition to government sector, the household sector encompassing all one-man and small enterprises that fall under the scope of personal income tax law play a key role in the field of music, theatrical productions and opera. In addition to the institutions financed by the central government, the role of performers working and paying taxes as one-man enterprises, or joint partnerships is also important. Accordingly, joint partnerships and one-man enterprises account for 56.7% of employees and the government and non-profit sector represents 43.3% of employees in the field of music, theatrical productions, opera.

78.2% of gross added value was generated by the corporate sector within **press and literature**, and accordingly 88.9% of employees were running one-man businesses or joint partnerships and 11.1% of employees were engaged in the government and non-profit sector.

The contribution of business associations and **one-man businesses**, or small enterprises in **photography** is equally shared between the two. Professional organisations are definitely associated with the non-profit sector.

The gross added value of core copyright industries in 2002 in the breakdown of sectors (HUF million, %)

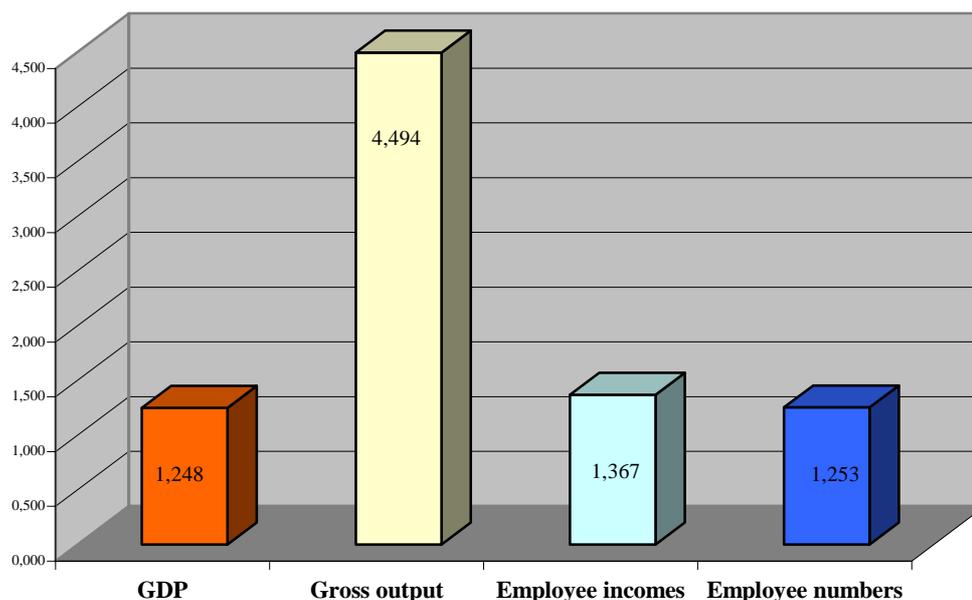
	Gross added value									
	National economy total	Corporate sector	Government sector	Household sector	Non profit sector	Corporate sector	Government sector	Household sector	Non profit sector	
	HUF million					percent				
<b>Press and literature</b>	182,019	142,312	21,132	18,575	0	78.19	11.61	10.20	0.00	
<b>Music, theatrical productions, opera</b>	78,579	14,886	32,636	26,931	4,126	18.94	41.53	34.27	5.25	
<b>Motion pictures and video</b>	18,770	16,439	0	2,331	0	87.58	0.00	12.42	0.00	
<b>Radio and television</b>	60,912	44,554	210	859	0	73.14	0.34	1.41	0.00	
<b>Photography</b>	7,639	3,166	0	4,473	0	41.45	0.00	58.55	0.00	
<b>Software and databases</b>	191,727	159,783	310	31,634	0	83.34	0.16	16.50	0.00	
<b>Advertising</b>	39,193	31,176	0	8,017	0	79.54	0.00	20.46	0.00	
<b>Professional organisations</b>	7,732	72	0	0	7,660	0.93	0.00	0.00	99.07	
<b><i>Core copyright industries (CORE) total</i></b>	<b>586,571</b>	<b>412,388</b>	<b>54,288</b>	<b>92,820</b>	<b>11,786</b>	<b>70.30</b>	<b>9.26</b>	<b>15.82</b>	<b>2.01</b>	

#### 4. Economic contribution of interdependent copyright industries

Interdependent copyright industries include industries/activities engaged in the production, manufacturing, and sale of instruments and equipment wholly or primarily designed to promote the creation, production, or “consumption” of copyrighted works and other protected subject matter.

The output value of interdependent copyright industries in 2002 was HUF 1,583 billion, which accounts for 4.49% of the gross national economic output. The gross added value of interdependent copyright industries was HUF 184 billion, which is 1.25% of the national GDP. In 2002, 49,000 people worked in these sectors, which amounts to 1.25% of all employees. The income of employees in the sector was HUF 105 billion, which comes to 1.37% of total employee incomes.

#### The economic contribution of interdependent copyright industries in Hungary in 2002 (%)



The data and the figure shown illustrates that the **contribution of interdependent copyright industries in gross national output was 3.5 times higher than its contribution to GDP, employment and employee incomes.** This phenomenon is largely due to the odd structure of the Hungarian economy. In Hungary the manufacture of durable consumer goods was developed in the 1990s by the involvement of foreign capital. Attracted by well-qualified labour, cheaper than in western Europe, a number of large foreign companies (e.g. Philips, Samsung) relocated their final assembly plants of a number of durables to Hungary; the activities were almost entirely based on the use and final assembly of imported materials and parts. When modern manufacturing technologies were introduced, yet they represented little

added value for Hungary. A similar process was evident in the manufacture of computers.<sup>24</sup> This explains the fact that in the manufacture of electronic entertainment products (televisions, radios, videos, CD players, DVD players, cassette players, video game consoles) and also in the manufacture of computers the relatively high gross output of these activities is coupled with a relatively low contribution to GDP. These industries work with above-average productivity, which is reflected in the fact that their employment rate is lower than their performance rate.

In 2002 the average ratio of gross added value and gross output of the Hungarian national economy was 42.02%. The same figure in core copyright industries was 42.14%, which is consistent with the national economic average. In contrast to this, the ratio of gross added value/gross output in the manufacture of entertainment electronics (televisions, radios, videos, CD players, DVD players, cassette players, video game consoles) and in the manufacture of computers was extremely low at 9.4%, and 6.4%. This is closely related to the dominance of low added value assembly activities.

On the other hand, the Hungarian economy is characterised by heavy imports of durable consumer goods, which explains the high proportion of retail and wholesale trade associated with interdependent copyright industries.

Taking these specifics into consideration, we studied the activities of interdependent copyright industries from two aspects. The statistical data provided by the HCSO were related to the manufacturers' activities and showed relatively aggregated figures on the wholesale and retail trade activities and rental of interdependent copyright industries. In our first approach, we listed retail and wholesale and rentals activities related to interdependent copyright industries as a separate figure.

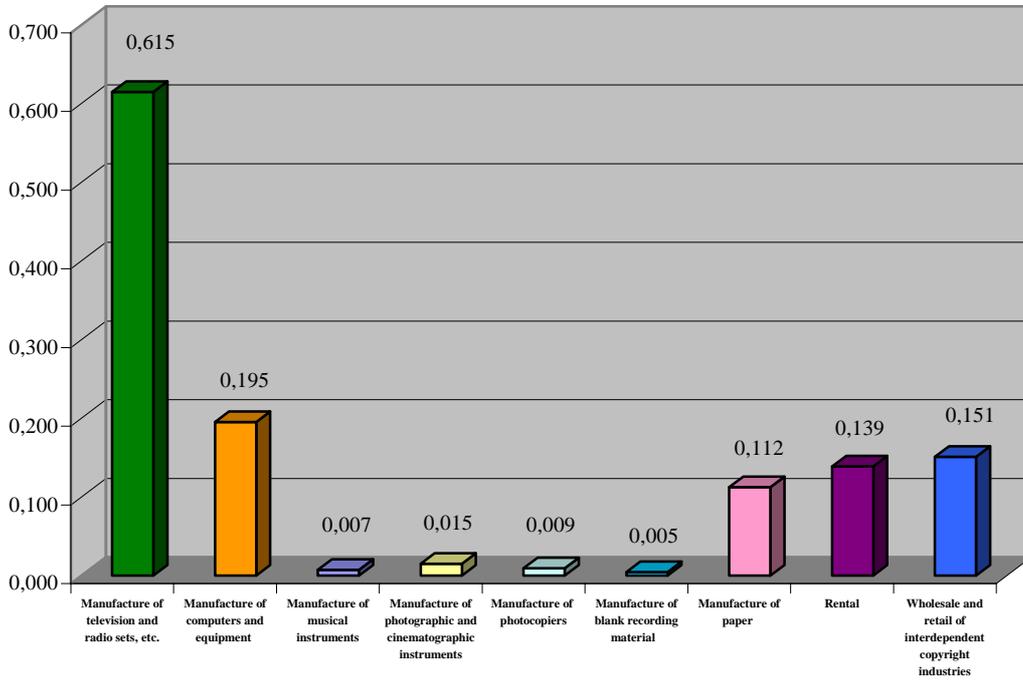
As for the performance rates within interdependent copyright industries, there are **two dominant areas**: the manufacture of televisions, radios, videos, CD and DVD players, cassette players, video game consoles, which are collectively referred to as **entertainment electronics**, and the **manufacture of computers** account for 65% of added value within the category. These manufacturing activities are followed by wholesale and retail, and rentals. The contribution of interdependent copyright-industry-related wholesale and retail activities to gross output and gross added value was 0.15% of the national economic average for both. The proportion of employees engaged in this sector was much higher at 0.24%. The higher-than-average labour demand of wholesale and retail is articulated in the fact that the contribution of trade-related activities to employment is higher than the economic contribution of wholesale and retail.

Entertainment electronic products (television, radio, etc.), computers, the manufacture of paper, together with wholesale, retail and rental account for 97% of added value in this field, which only demonstrates that there is practically hardly any manufacture of photocopiers, musical instruments, blank recording materials, photographic equipment in Hungary.

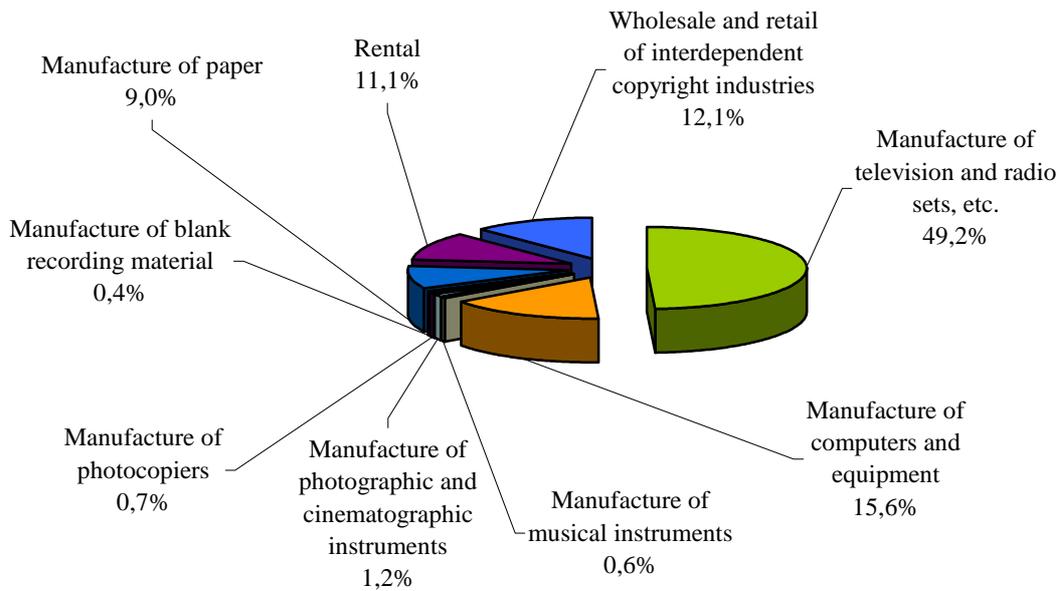
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<sup>24</sup> In the customs-free zone Székesfehérvár factory of IBM hard disk drives were manufactured. IBM Storage grew into becoming Hungary's sixth largest companies and was one of the largest exporters in the country. Due to falling global demand, IBM closed productions in its Székesfehérvár factory on 30 November 2002.

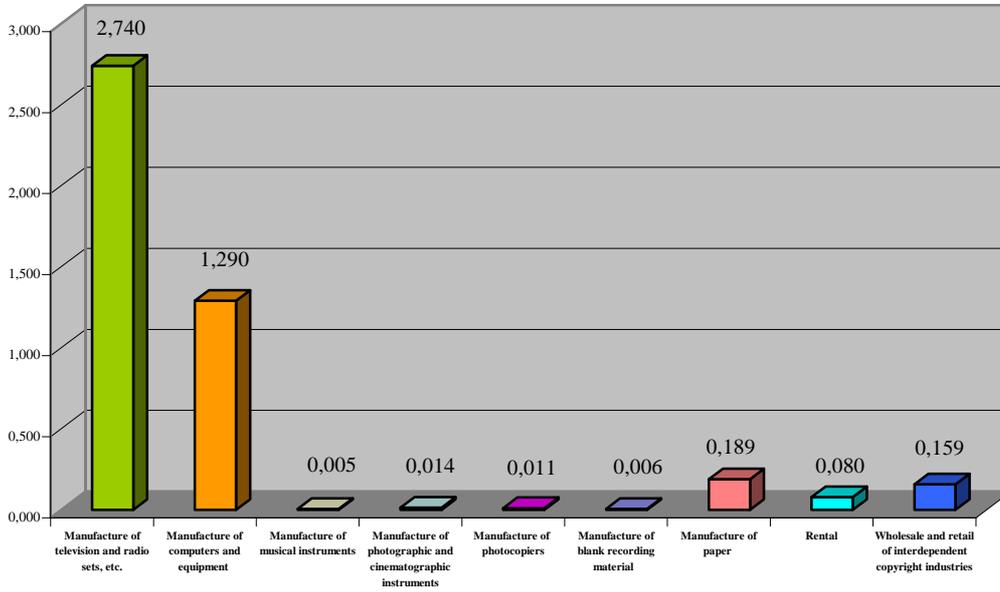
**The contribution of interdependent copyright industries to GDP in 2002  
(wholesale and retail shown separately, %)**



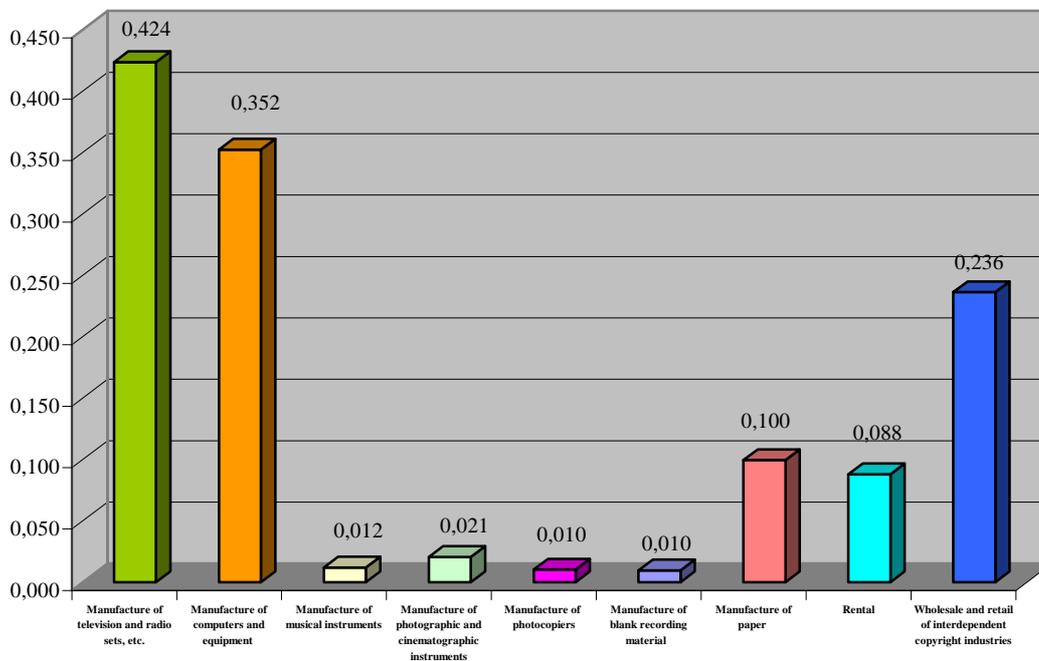
**The contribution of interdependent copyright based industries to gross added value in 2002 (%)**



**The contribution of interdependent copyright industries to gross output in 2002  
(wholesale and retail shown separately, %)**



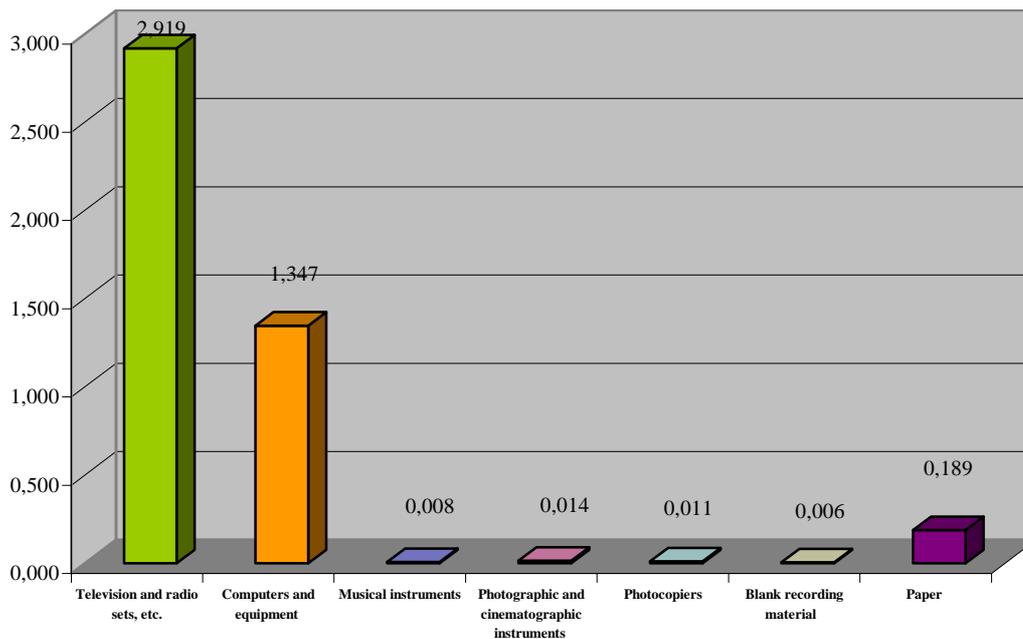
**The contribution of interdependent copyright industries to employment  
(wholesale and retail shown separately, %)**



In the second approach we shared the values of wholesale and retail, and rental activities among the given sectors as a form of data correction. The purpose of data correction was to adapt the Hungarian statistics to the European and American practices and include not only the manufacture but also the wholesale and retail of hardware products of copyright industries and also rental activities where applicable. Consequently, we divided the wholesale and retail activities relating to interdependent copyright industries – in consideration of the proportion of added value – among the given sectors. The following distribution values have been prepared with the inclusion of data adjusted for wholesale and retail and rental, but must be treated with caution as rough estimates.

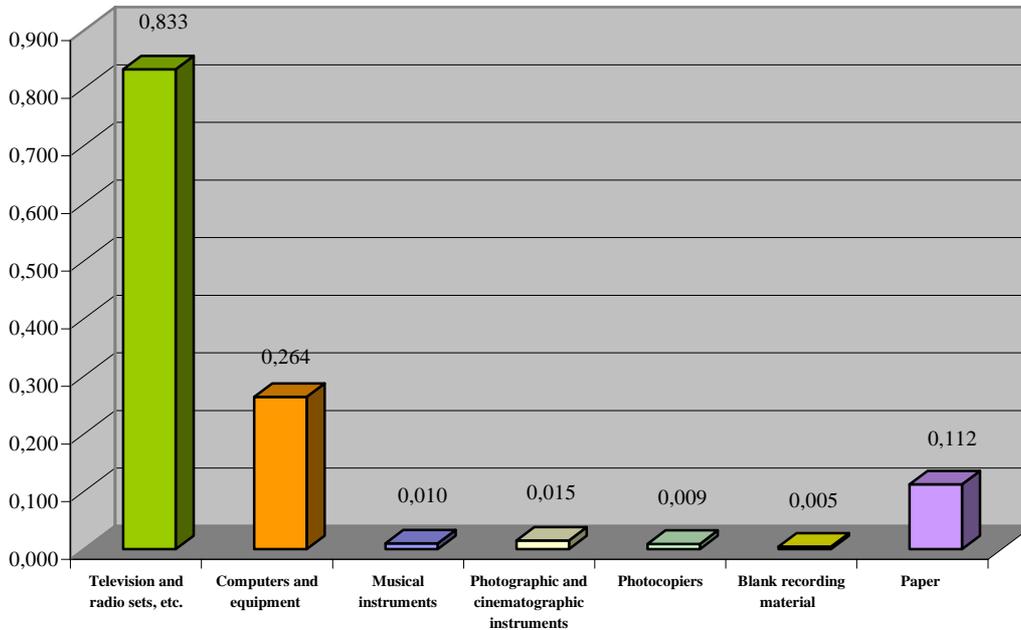
**Based on its contribution to gross output**, out of all the interdependent copyright industries **entertainment electronics** (television, radio, video, CD and DVD players, cassette players, and video game consoles) **is ranked top** followed by the computer industry. The lion's share (93%) of aggregate output of interdependent copyright industries is given by these two sectors. The output of the remaining sectors is insignificant.

#### The contribution of interdependent copyright industries to gross output in 2002 (%)



The above two sectors – entertainment electronics and computer industry – play the most important role in the **contribution to GDP**. In addition to these, the paper manufacturing sector is worth attention for its contribution to GDP.

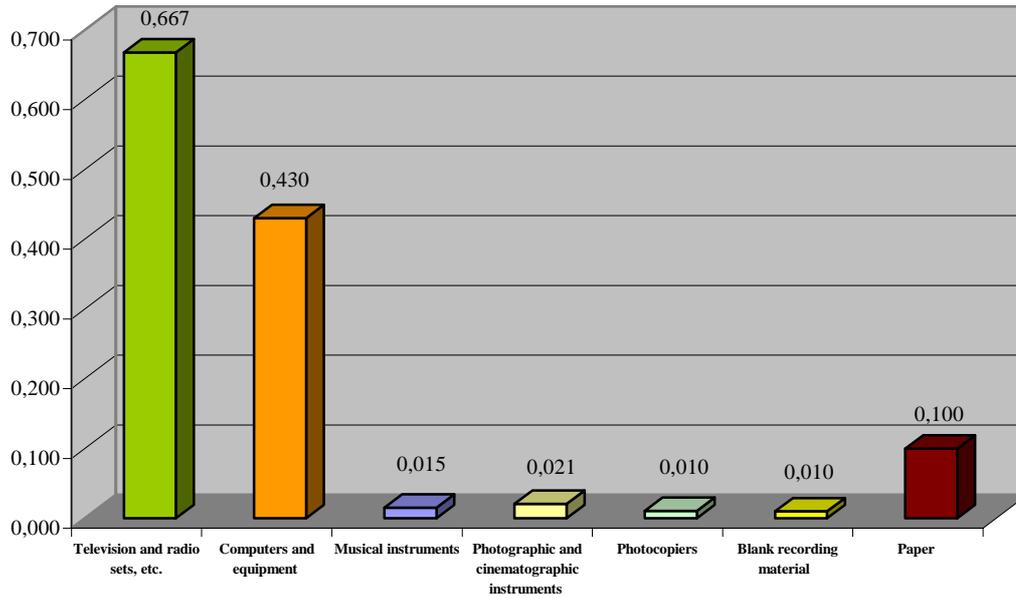
### The contribution of interdependent copyright industries to GDP in 2002-ben (%)



The importance of this area is demonstrated by the fact that the above three industries (entertainment electronics, computers and equipment, and paper manufacturing) accounted for 97% of the aggregate gross added value of the interdependent copyright industries. What is more, only two of the three (entertainment electronics, computers and equipment) are responsible for 89% of all added value. The “industrial” performance of musical instruments, photographic instruments, and photocopiers is insignificant in the Hungarian economy.

The sectors with the highest number of employees within the interdependent copyright industries are: entertainment electronics, computers and equipment and paper.

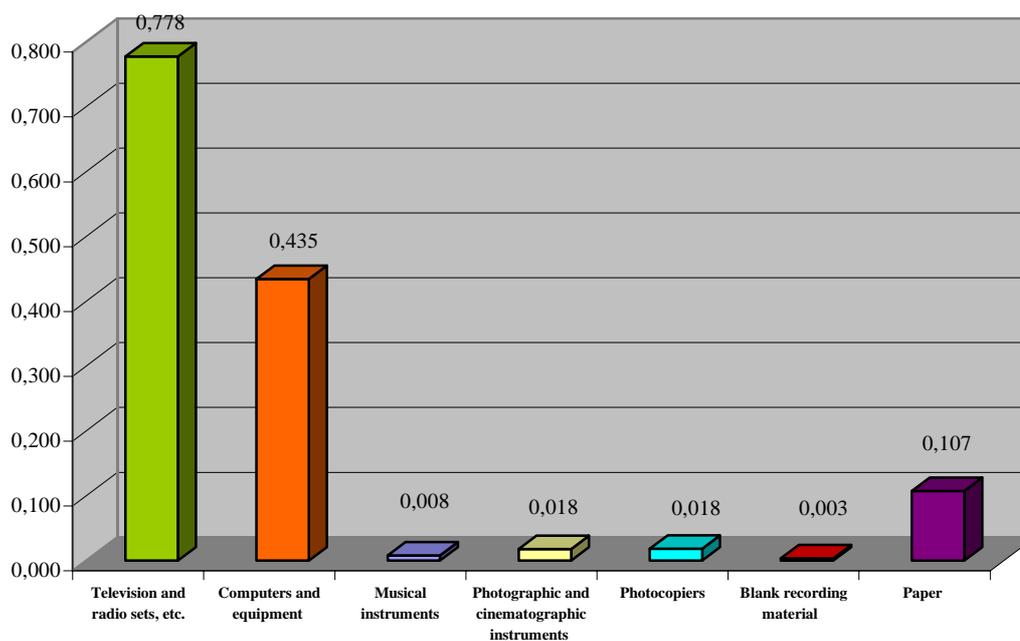
### The contribution of interdependent copyright industries to employment in 2002 (%)



**95.5% of employees** in the interdependent copyright industries **were engaged in these three industries.**

Again, the role of the above three industries previously mentioned with respect to employee incomes is dominant with a share of 96.6%.

### The contribution of interdependent copyright industries to employee incomes in 2002 (%)

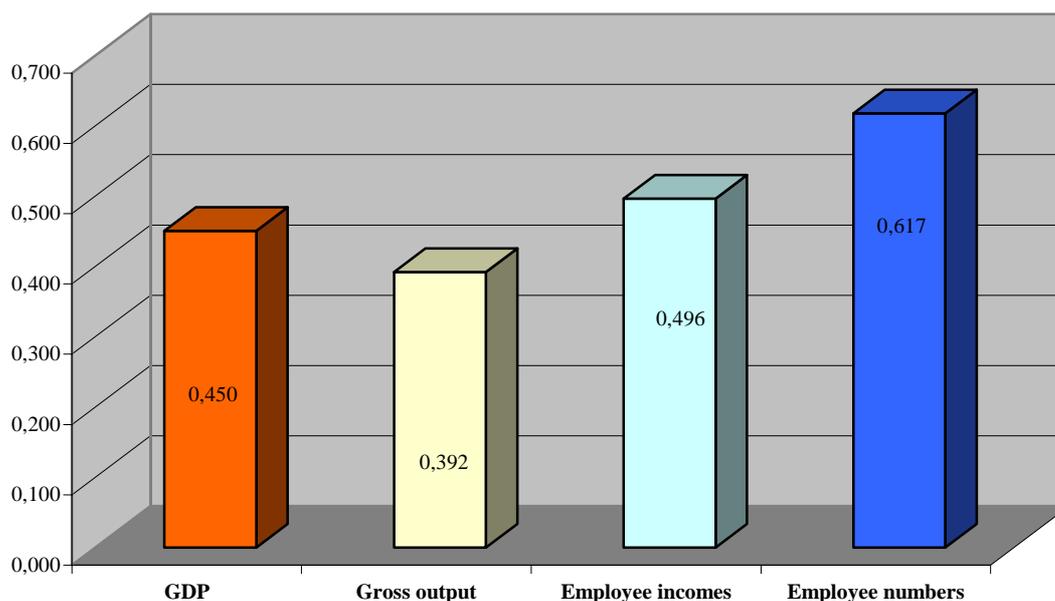


## 5. The economic contribution of partial copyright industries

Partial copyright industries include industries that are only partially engaged in production copyrighted works, i.e. only a specific segment of their activities is aimed at creating copyright-protected works. The proportion of copyrighted works is expressed by the so-called copyright factor<sup>25</sup>, whose value was established by an expert estimation. The performance indicators of partial copyright industries below are adjusted by the copyright factors, and the following distribution rates have also been prepared using performance values adjusted by the copyright factors.

**The contribution of partial copyright industries to performance and employment is relatively low**, since most of the activities of these industries are not aimed at creating copyrighted works and other protected subject matter. The value of gross output of partial copyright industries in 2002 was HUF 138 billion, which accounted for only 0.39% of gross national output. Added value generated by these sectors amounted to HUF 67 billion, which is 0.45 of national GDP. The number of employees engaged in partial copyright industries was 24,000 accounting for 0.61% of total employment. Contribution to employee incomes was HUF 38 billion – representing 0.49% of the national aggregate.

**The economic contribution of partial copyright industries in Hungary in 2002 (%)**

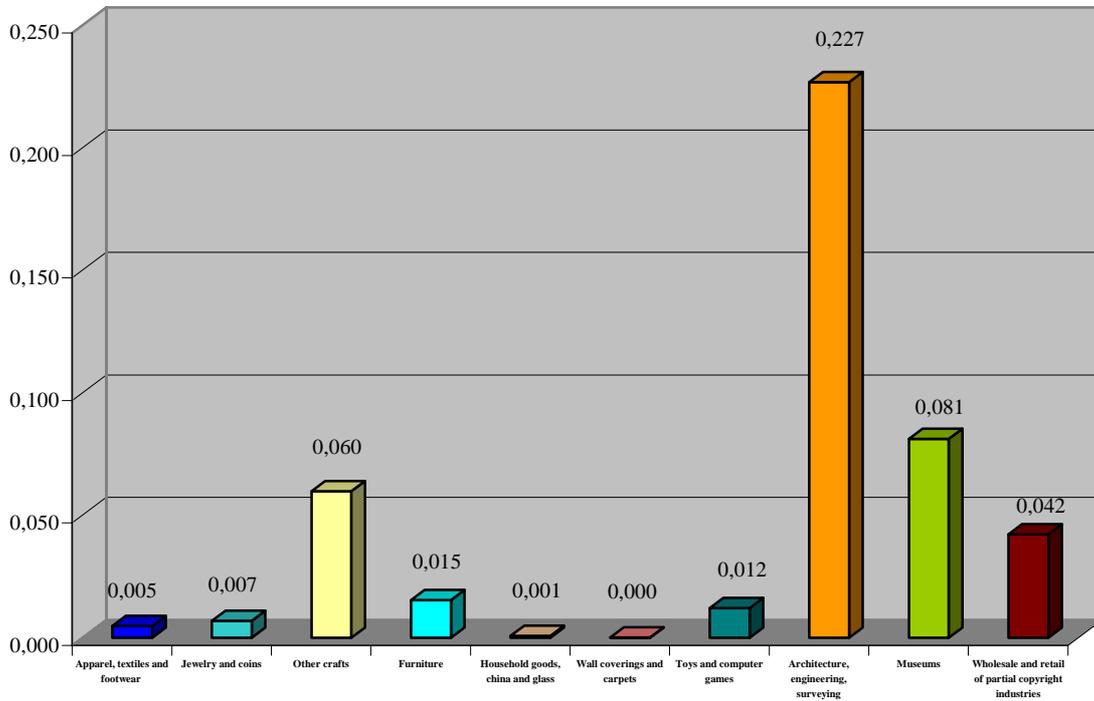


The proportion of retail and wholesale in partial copyright industries is nearly 10%.<sup>26</sup>

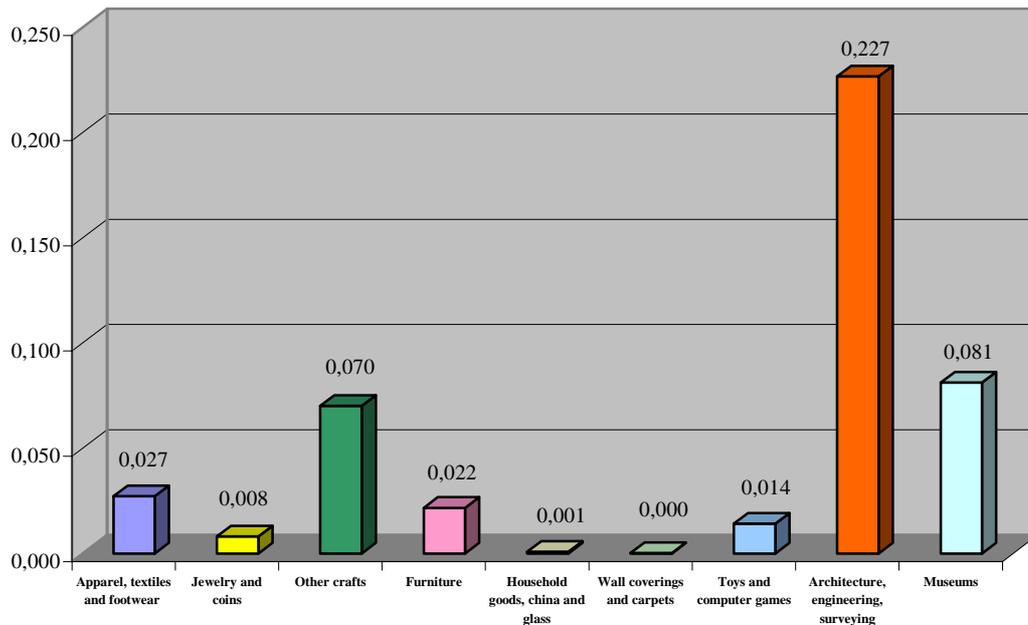
<sup>25</sup> For more details on copyright factor, see section 2 of Chapter III.

<sup>26</sup> As shown by the following two figures, we made two calculations: one where wholesale and retail was separated in different lines and one where they were distributed among the specific sectors.

**The contribution of partial copyright industries to gross added value in 2002 (wholesale and retail shown separately, %)**



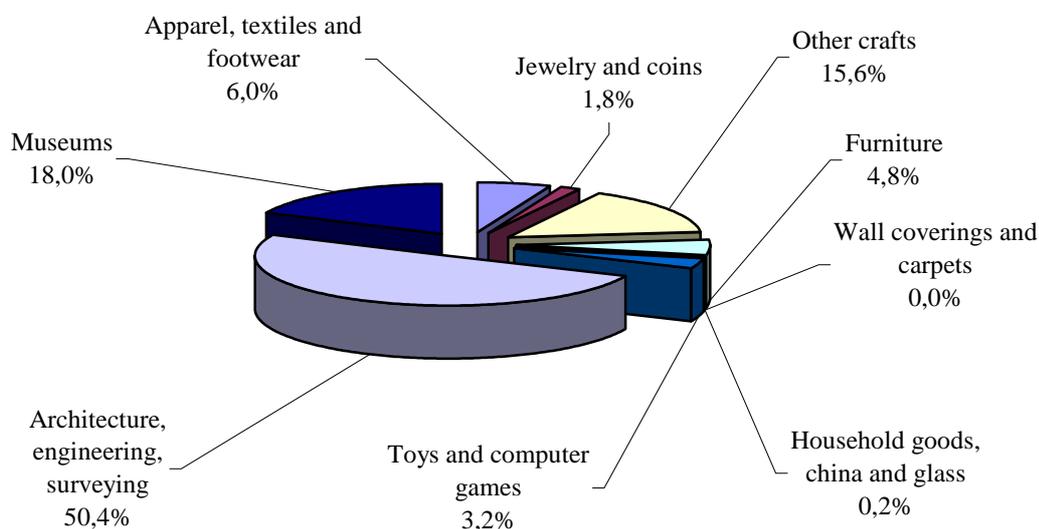
**The contribution of partial copyright industries to gross added value in 2002 (%)**



Based on contribution to gross added value, gross output and employment, as well as to employee incomes, the following activities play the most important roles among the partial copyright industries in order of contribution: **architecture, engineering, and surveying, museums, other crafts, apparel and toys**. The **ranking** is not indicative of the size of the

sector, but primarily of the **extent of activities aimed at creating copyrighted works and products.**

### The structure of partial copyright industries based on contribution to GDP in 2002 (%)



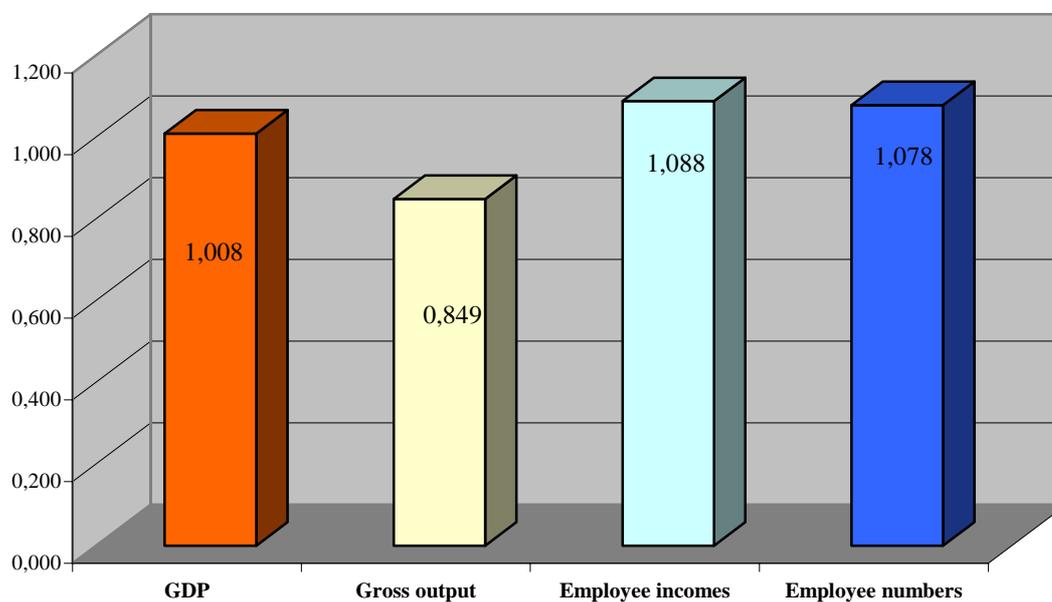
## 6. The economic contribution of non-dedicated support industries

The non-dedicated support industries make a contribution to the broadcasting, communication, distribution, and sale of copyrighted works and products. In the calculations we relied on the simplifying presumption that the copyright-related activities of general wholesale and retail, general transportation, storage, and communication are identical to the contribution of copyright based industries to GDP.<sup>27</sup>

The **economic contribution of non-dedicated support industries/activities is about 1%**. In 2002 the non-dedicated support activities relating to copyright based industries contributed HUF 299 billion to national economic gross output (0.85%). The gross added value of non-dedicated support industries was HUF 149 billion – 1.01% of GDP. The estimated number of employees engaged in non-dedicated support industries related to copyright based areas was 42,000, making up 1.08% of total employment. Employee incomes thus came to HUF 84 billion, which was 1.09% of aggregate national employee incomes.

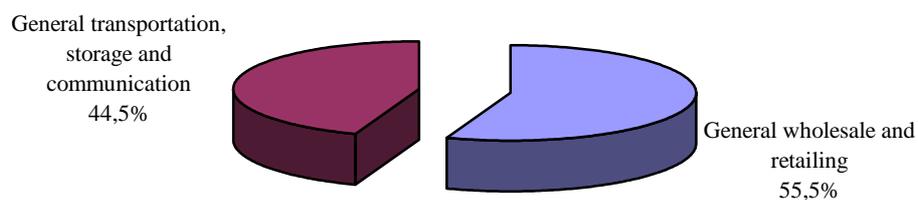
<sup>27</sup> This assumption is accepted by international methodology. See: Stephen E. Siwek – Harold W. Furchgott-Roth: Copyright Industries in the U.S. Economy, 1990. Appendix B-6.

**The economic contribution of non-dedicated support industries relating to copyright based industries in Hungary in 2002 (%)**



The performance of non-dedicated support industries was approximately **equally shared (55-45%)** between general transportation, storage, telecommunication, and general wholesale and retail.

**stries relating to copyright based industries on the basis of contribution to gross added value in 2002 (%)**



## 7. International comparisons

We compared the economic contribution of copyright based industries in Hungary with other countries. On the one hand we had the final report on the EU countries<sup>28</sup>, and the recently published Latvian<sup>29</sup> and Singapore studies<sup>30</sup>, and the latest USA report<sup>31</sup> which served as an excellent basis for comparison. Comparison with EU countries was made with respect to the aggregate weight of core copyright industries, and interdependent copyright industries because the limitations of the available European data only allowed for comparison in these two categories. Comparison of the entire scope of copyright based industries is only possible with the USA, Latvia, and Singapore by using the results of the latest studies.

The economic contribution of copyright based industries in Hungary is consistent with the values registered in the EU member states; in fact, we are ranked **among the EU leaders in this respect**. The contribution of copyright based industries to employment is also strong and we are again ranked among the top EU countries.

The contribution of core copyright industries to gross added value was highest in the UK (7.1 %) and in the USA (5.98 %)<sup>32</sup>. Hungary's position on this regard was also quite impressive with **3.96% of the GDP, which is slightly higher than the EU-15 average of 3.9%**. This put Hungary in front of Germany (3.5%), France (3.4%), Italy (3.3 %), Finland (3.2 %), Austria (2.3 %), and Ireland (2.1 %) just to name a few.

The **proportion of employees** engaged in activities within the core copyright industries against all employees in Hungary in 2002 was **4.15%, which is well above the EU-15 average of 3.1%**. In this regard we were ranked ahead of countries like the UK (3.2%), the USA (4.02%), and Sweden (2.7%). The high representation of core copyright industries in employment is not a self-evident and unconditional advantage since this index is also indicative of differences in productivity. High employment numbers in an international comparison also means that the higher added value generated by the UK, USA, and Sweden is in fact generated by fewer employees than in Hungary.

The aggregate economic contribution of core copyright industries and interdependent copyright industries accounted for 5.2% of the GDP in Hungary and represented 5.4% of all employment. These results place Hungary among the European leaders.

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<sup>28</sup> Robert G. Picard–Timo E. Toivonen–Mikko Grönlund: The Contribution of Copyright Related Rights to the European Economy, Final Report, 20 October 2003.

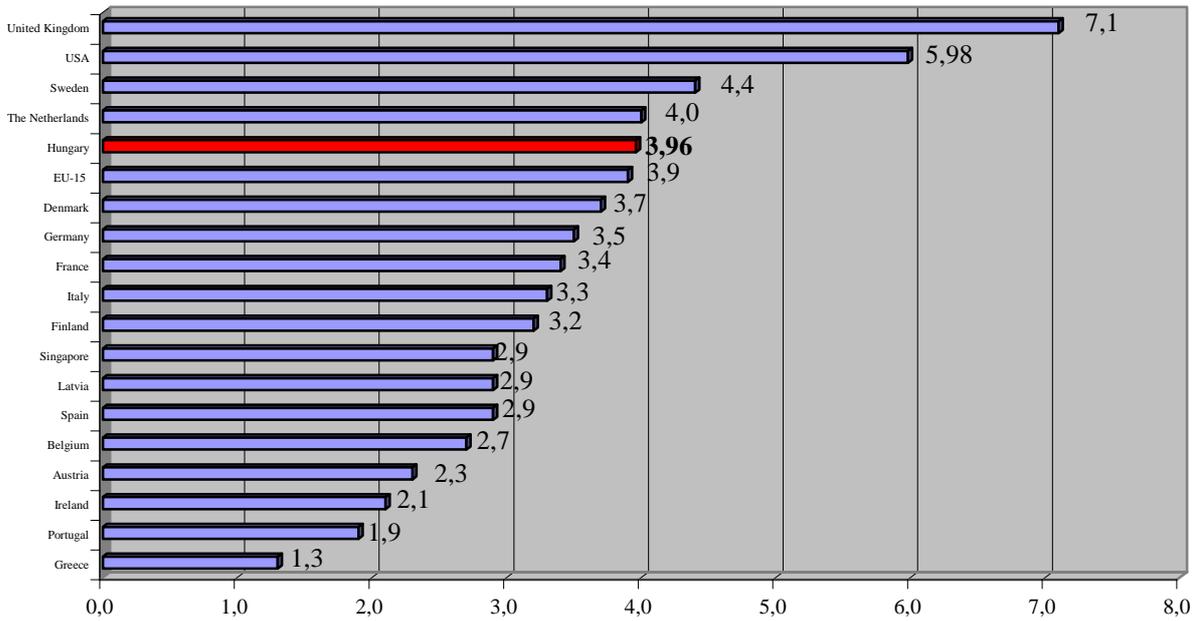
<sup>29</sup> Robert G. Picard–Timo E. Toivonen: The Economic Contribution of Copyright-based Industries in Latvia 2000.

<sup>30</sup> Leo Kah Mun–Chow Kit Boeey–Lee Kee Beng–Ong Chin Huat–Loy Wee Loon: Economic Contribution of Copyright-Based Industries in Singapore, October 2004.

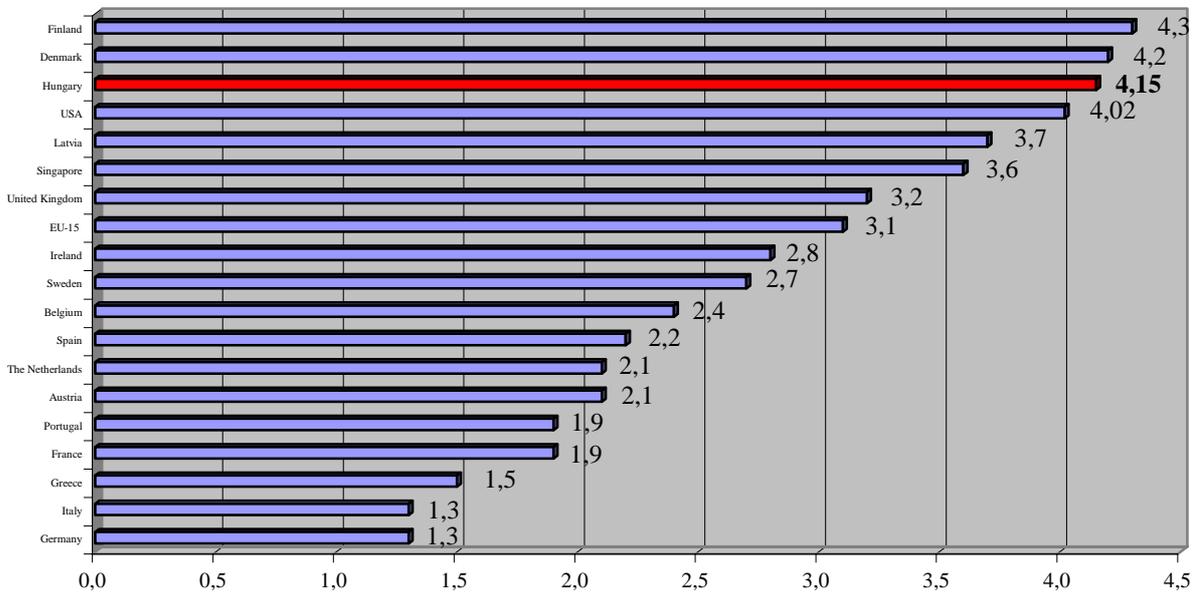
<sup>31</sup> EU data are from the year 2000, the US data are from 2002, the Latvian data are from 2000, Singapore data are from 2001, and the Hungarian data are from 2002.

<sup>32</sup> Data of the US report. Stephen E. Siwek: Copyright Industries in the U. S. Economy. The 2004 report.

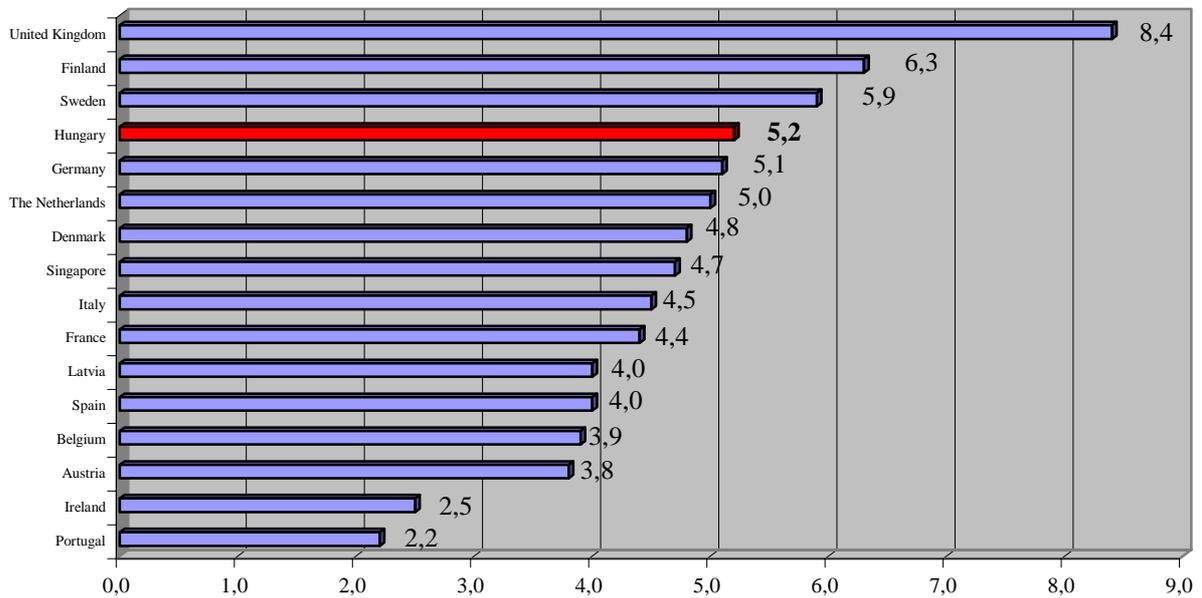
**The contribution of core copyright industries to GDP by international comparisons (%)**



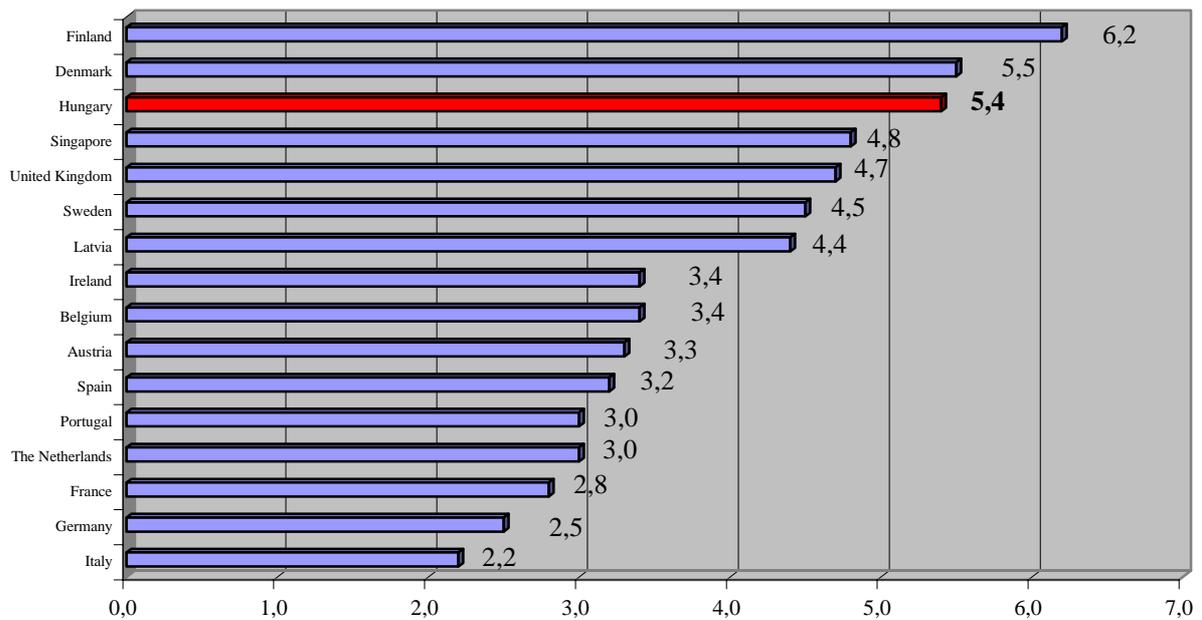
**The contribution of core copyright industries to employment by international comparisons (%)**



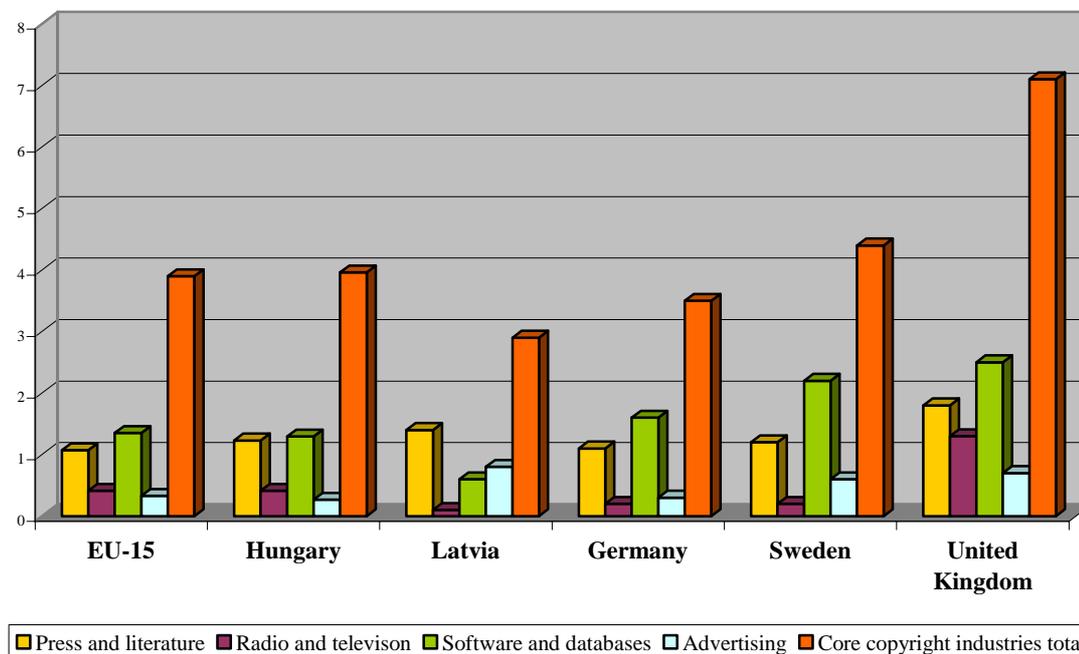
**The aggregate contribution of core copyright industries and interdependent copyright industries to GDP by international comparisons (%)**



**The aggregate contribution of core copyright industries and interdependent copyright industries to employment by international comparisons (%)**



### The contribution of core copyright industries to gross added value by international comparisons (%)



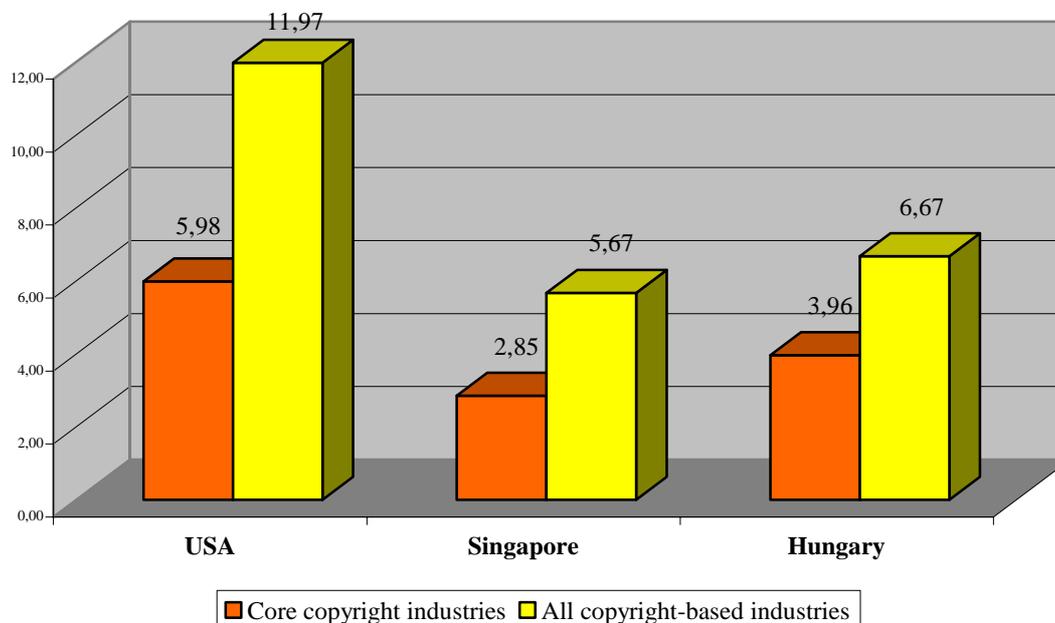
Out of the key core copyright industries in Hungary, the contribution of **press and literature** to gross added value was 1.23% in 2002. This value was higher than that of Austria (0.9 %), France (0.8 %), Germany (1.1 %), and Spain (1.1 %). The contribution of press and literature to GDP was higher in Finland (1.4 %), Denmark (1.7 %), and the United Kingdom (1.8 %). In Sweden the economic contribution of the sector was the same as in Hungary (1.2 %).

The 1.3% contribution of the Hungarian **software and database industry** in the GDP is close to the EU average of 1.35%. The economic performance of this fast-expanding industry in Hungary is higher than in Austria (0.9 %), Spain (0.8 %), Latvia (0.6 %) and Singapore (1.08 %), but lower than in Germany (1.6 %), Italy (1.7 %), France (1.9 %), Sweden (2.2 %), and the United Kingdom (2.5 %).

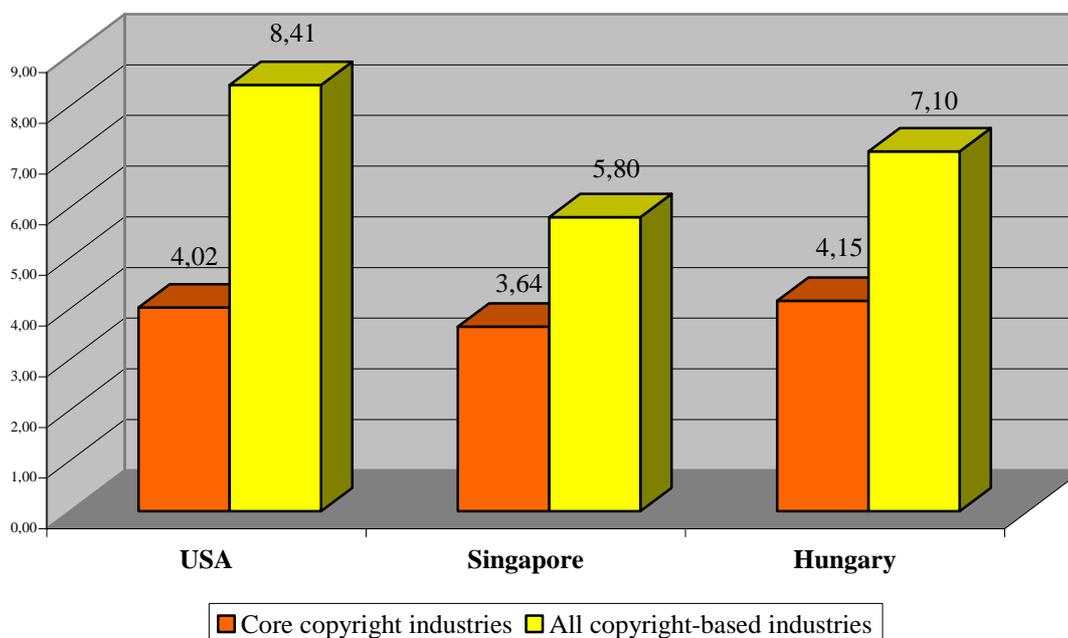
The aggregate economic contribution of **radio and television** and **advertising** was 0.68% in 2002 in Hungary; this is higher than that of Germany (0.5 %), Denmark (0.4 %), Finland (0.5 %) and close to that of Sweden (1.8 %), Spain (0.7 %) and Holland (0.7 %). In Europe the United Kingdom is number one with radio and television representing 1.3% and advertising accounting for 0.7% of the GDP.

Only for the USA, Singapore and Hungary did we have sufficient data<sup>33</sup> indicating the contribution of all four categories of the copyright based sectors to the national GDP, and employment.

**The contribution of core and all copyright based industries to GDP by international comparisons (%)**



**The contribution of core and all copyright based industries to employment by international comparisons (%)**



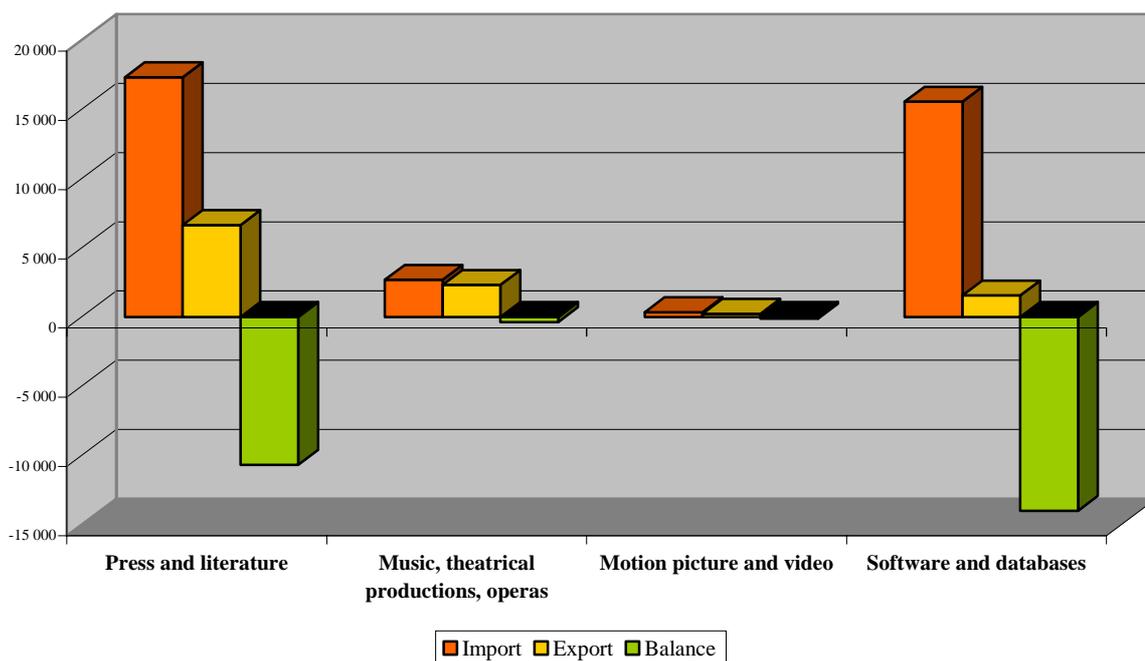
<sup>33</sup> The Latvian report only provides ratios for the first two categories; the percentage figures on aggregate contribution are not available.

## 8. The foreign trade turnover of copyright based industries

The Hungarian statistical system allows for the foreign trade turnover of copyright based industries to be studied from two different aspects: on the one hand, we have the data relating to products sold on the foreign trade market and, on the other, there is export services-related information. Copyright based industries produce tangible goods whose import and export value indices and turnover are shown by the foreign trade turnover statistics, which are based on the customs records. On the other hand, as a result of copyright based activities, intangible goods (rights) are produced, whose foreign sales are shown by service export statistics.

The value of imported products<sup>34</sup> related to **core copyright industries** in 2002 was HUF 35.9 billion, which accounted for 0.42% of all imports. The value of exported products generated by core copyright industries came to HUF 10.7 billion, which amounted to 0.13% of total exports. The **product import** of core copyright industries was **three times that of product export**. As a consequence **the foreign trade balance** of core copyright industries showed a deficit of **HUF 25.2 billion in 2002**. The foreign trade deficit of core copyright industries indicates that the potential export opportunities should be better exploited.

**Foreign trade turnover of core copyright industries in 2002  
(HUF million)**



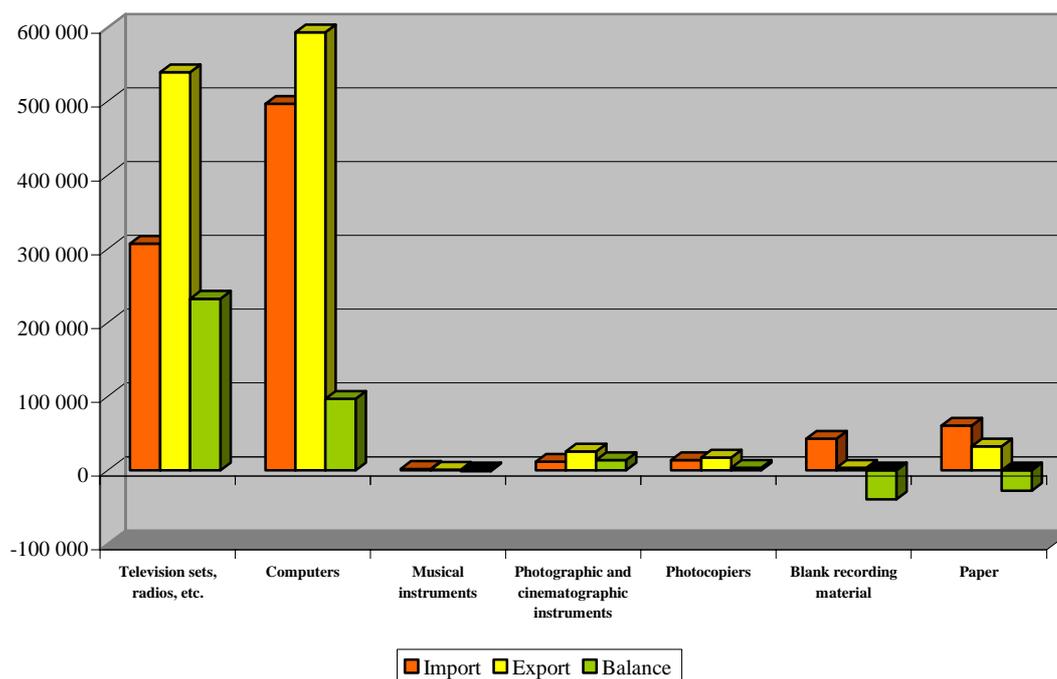
The figure shows clearly that the areas with the largest export activities are **those that generate the largest foreign trade deficit. They are: press and literature, software and databases**. Within core copyright industries, the import of software and databases was almost ten times that of exports in the same field, and as a result, the balance of product sales was

<sup>34</sup> Of all core copyright industries, the sectors to appear in foreign trade statistics are those that are engaged in product manufacture; all service sectors (e.g. radio and television, advertising) can only be studied with the help of service export statistics.

HUF 14 billion in deficit. The value of imports of press and literature was 2.6 times that of exports and the foreign trade deficit thus came to HUF 10 billion. The only possible option for these two areas is not to reduce imports but to seek ways to increase exports.<sup>35</sup> Of all the remaining areas the low export figures of music, theatrical productions, and opera are indicative of the unexploited potentials in the domain of export of classical music and urge us to exploit our present competitive edge much more effectively<sup>36</sup>.

The value of product import of **interdependent copyright industries** in 2002 was HUF 934.2 billion, which is 10.8% of total imports. The value of product export of these sectors came to HUF 1,211.7 billion, which accounted for 15.1% of all exports. In interdependent copyright industries the value of exports was 30% higher than the value of imports and as a result, the **balance of foreign trade was mainly positive at HUF 277.5 billion**. Of all interdependent copyright industries the export of computers accounted for 7.4% of all exports and the export sales of entertainment electronics (television, radio, video, CD and DVD players, cassette players, video game consoles) made up 6.7% of all export sales. Similarly high is the share of these two domains in total imports: the import of computers amounted to 5.8% while the import of entertainment electronics (television, radio, video, CD and DVD players, cassette players, video game consoles) accounted for 3.6% of all imports.

#### Foreign trade turnover of interdependent copyright industries in 2002 (HUF million)



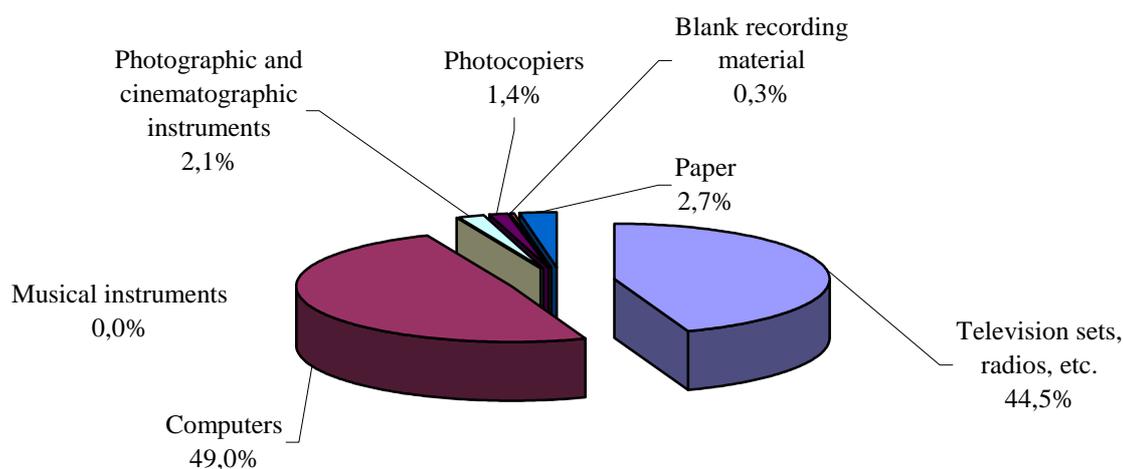
The figures clearly illustrate that **interdependent copyright industries play a significant role in the foreign trade of Hungary**. 93.5% of interdependent copyright industries export sales were realised in the domains of computers and equipment, entertainment electronics (television, radio, video, CD and DVD players, cassette players, video game consoles).

<sup>35</sup> Making use of intensified attention towards Hungarian literature owed to the Nobel prize-winner Imre Kertész would be a good idea to start.

<sup>36</sup> For example, Hungarian cultural festivals held abroad provide ample opportunities to exploit.

Imports are also similarly concentrated since the import of products from these two domains accounted for 86.1% of total imports. The high representation of computers and entertainment electronic products in total imports and total exports is related to the above-described Hungarian particularity in its industrial structure whereby the relocated export-oriented production sites of multinationals in Hungary perform the final assembly of their products by primarily relying on imported materials with the vast majority of end-products being sold on foreign – mostly European – markets.

### Structure of exports of interdependent copyright industries in 2002 (%)



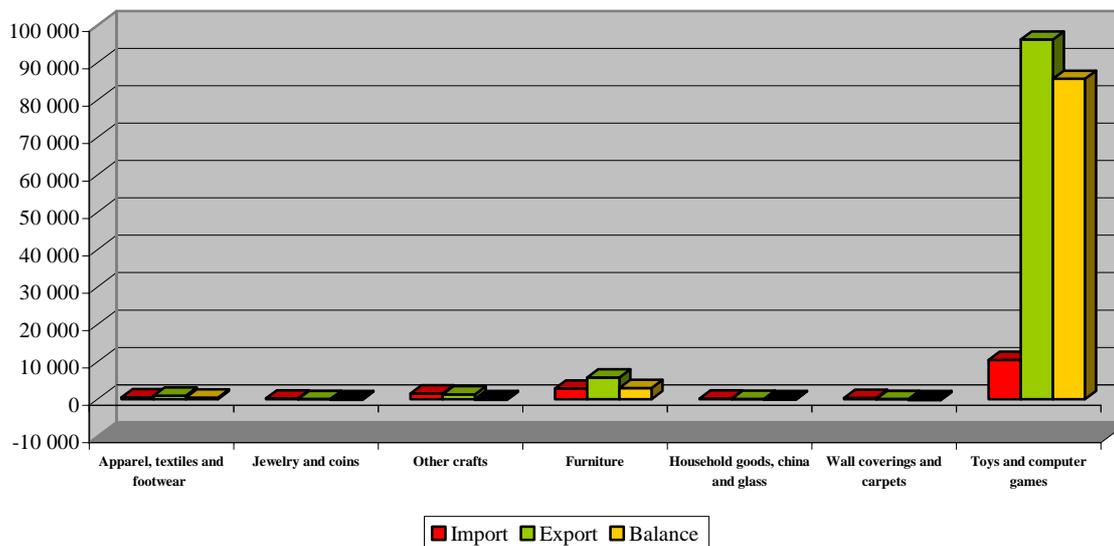
The value of exports relating to **partial copyright industries**<sup>37</sup> in 2002 was HUF 104.5 billion, which accounted for 1.3% of total foreign sales. The value of imports came to HUF 16.1 billion amounting to 0.19% of total imports. The value of exports of partial copyright industries was 6.5 times that of imports. As a result, the balance of foreign trade was positive at HUF 286 billion.

The graph shows that **toys and computer games played a pivotal role in the export of partial copyright products**. These products accounted for 65.1% and 92.1%<sup>38</sup> of imports and exports of partial copyright products respectively. These foreign trade figures clearly reflect the impact of export-oriented production based on domestic labour force.

<sup>37</sup> In the examination and analysis of the import and export values we relied on export and import values adjusted by the copyright factor.

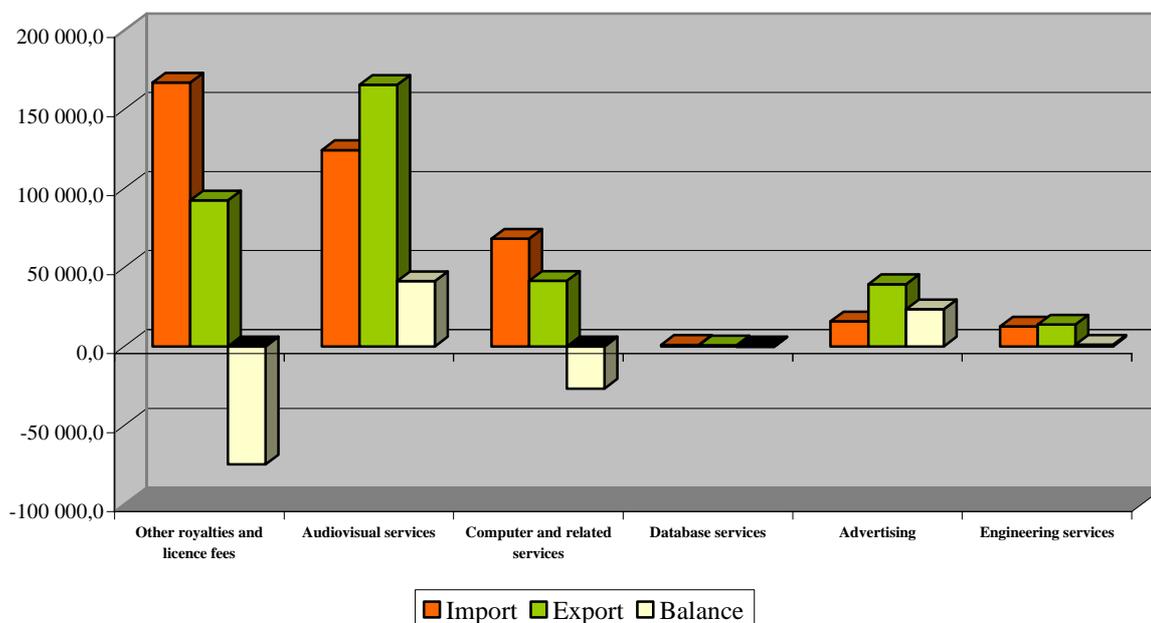
<sup>38</sup> The performance of toys and computer games was strongly affected by the fact that Flextronics had manufactured Xbox products in Hungary between 2001 and the middle of 2002. Two Hungarian manufacturing plants – one in Sárvár and one in Zalaegerszeg – were producing 15 thousand Xbox products a day first for the American and later for the Western European markets. The Zalaegerszeg plant produced parts and printed circuits while the Sárvár site was responsible for assembly, testing, and logistics. Due to price competition, the Hungarian manufacturing capacities had been relocated to China because of lower production costs in 2002.

### Foreign trade of partial copyright products (HUF million)



The value of imported copyright based services in 2002 was HUF 389 billion – 0.32% of total imports. The value of exported copyright based services in 2002 was HUF 353 billion, which accounted for 0.37% of total export of services. As a result, the **foreign trade balance of copyright based services showed a deficit of HUF 35 billion.**

### Foreign trade turnover of copyright based services in 2002 (HUF million)



Out of all copyright based services, imports significantly exceeded the value of exports in the fields of other royalties and licence fees, computing and related activities, and database

activities. At the same time, the balance of foreign trade in the domain of audiovisual service activities, advertising, and engineering service activities showed a significant surplus.

## SUMMARY OF FINDINGS

This survey is the first analysis in Hungary, which to outline and numerically support the importance of the copyright based sector in the economy regarding performance and rate of employment. According to these findings, **copyright based industries are of vital importance in the overall national economy, both when compared to other sectors of the economy and when compared to other countries in the EU.** The total contribution to the national economy by copyright based industries was 6.67% to the national economy's gross added value, 9.68% to the gross output and 7.17% of the employee's income and 7.1% of the employment rate was from this sector. The contribution by core copyright industries was 3.96% to the national economy's gross added value, 3.95% to its gross output, 4.22% to the employee's income and 4.15% of the employment rate was from this sector.

**Even in an international context, the weight of the copyright based industries in the economy regarding performance and rate of employment is high and this fact allows Hungary to be at the forefront of the EU countries.**

In the Hungarian copyright based industries there is a typical tendency for the **rate of employment to outweighs the performance rate in the economy**, which means it requires a higher degree of employment, while it performs less well compared other industrialized countries. This ineffectiveness can be reduced by technical developments in the copyright based industry, however, this require investments.

From the perspective of future structuring of the Hungarian **economic policy decision-making**, it must be noted that the copyright based sector is the strongest amongst all traditional economic sectors. The total economic weight of all copyright based industries almost equals the whole of the engineering industry and is larger than the education and the construction industries. On the other hand, the economic weight of the core copyright industries can be compared to such sectors as the textile industry, metallurgy, the food processing industry and the electricity industry.

**Considering their economic weight, copyright based industries do not receive the consideration deserved from economic policies;** a situation which in the future ought to be changed. Economic policy decision-makers and other players in the copyright based industries must be made aware of the importance and weight of this economic sector. The socio-economic power of the copyright based industries is not proportion to its economic weight, while treatment and regulation of certain copyright based industries can differ. The copyright based sector is made up of many different types of activities and fields. Such diversity may result in the copyright based industry's interest representation ability to be weaker than its economic weight. This situation can only be resolved through coalition of forces driven by common interest and by finding common goals and objectives.

The economic weight of the copyright based industries puts a great emphasis on the importance of **copyright awareness**, which has been somewhat neglected in Hungary. In respect of copyright related issues, Hungary is low on the list of the EU countries. Raising awareness in individual and institutional users regarding copyright related issues cannot be achieved in the short-term. Motivational and disciplinary measures, as well as long-term awareness-raising programs must be prepared and introduced in order to help develop such awareness towards copyright related issues, which would need a coalition of forces from the government and civil spheres.

The copyright based industry can be regarded as a **considerable foreign-trade factor**. The foreign trade deficit of the core copyright industries could be better exploited considering the present potential export possibilities. In both export and import, the press and literature, as well as software and databases play a role of crucial importance amongst core copyright industries. The low number of exports in music, theatrical plays and the opera indicate an export possibility which, so far, has been not been thoroughly exploited and increases the need to capitalize on our competitive edge.

Hungary – concentrating on the manufacture of certain recreational electrical goods – also takes part in the international labour division of copyright based industries and in this way contributes to the shaping of the balance of foreign trade. In the area of services, audiovisual and associated services are significant balance sheet stimulators in foreign trade.

In international comparisons, the importance of the copyright based industries in the economy regarding performance and rate of employment is high and it **goes hand-in-hand with a large structural deficit**, which can be attributed to the cultural sphere's developing trends and derived through international comparisons. In the cultural sphere, Hungary is left behind in many aspects. In an international context, the degree of supply of cultural consumer durables and recreational electronic goods is of a relatively low. The general public's regular use of the facilities of the cultural institution system – i.e.: cinema, theatre, concerts - is confined. The expenditure level for cultural purposes by the public shows a low euro value. The number of CDs sold per capita puts Hungary far down the list in the EU countries. Screenings of newly-produced films are also at a low level. The share of national/local content-based programs on television is minute.

Considering the spreading **negative phenomena** of the copyright based industries, even at an international level, Hungary is amongst the top countries in the EU. We are amongst the leaders in distribution, utilization of pirated copies, audio carriers, software, as well as in the amount of time spent watching television.

The rate of price increases for cultural services has exceeded the rate of the consumer price index, which is an unfavourable tendency. At the same time, the rate of growth of cultural expenditures from the budget is lower than the growth of the inflation. The concentration and centralisation of the cultural institution network has continued to grow in favour of the capital and larger regional cities. In book publishing, the steepest decline in the number of copies printed was experienced in the area of fiction.

Even in an international comparisons, the cultural sector was able to show **impressive results**. It has the second highest rate of sales of classical music devices in Europe. Hungary is amongst the few countries, where national film production plays an important role and where the percentage of premiered local productions is relatively high, compared to the total of newly-produced international films. (At the same time, the revenue from ticket sales from locally-produced films is low in comparison with other EU countries – around 5%). Hungary's performance, compared to EU countries, is average regarding the sales rate of locally-produced sound medium devices, the number of copies printed of daily newspapers per capita, the number of book titles per capita, as well as the number of cinemas. We are amongst the leaders in the rate of cable television reception.

The political transformation similar to all other economic sectors brought radical changes in the cultural sphere, to which the majority of the core copyright industries belong. Over the last fifteen years, the cultural institutional system has gone through a restructuring process. Many new players have appeared on the market, the organizational structure of ownership has transformed, the media and the culture-consuming public has changed.

According to cultural statistics, in the last fifteen years since the political transformation, Hungary's cultural production has grown and developed tremendously, however, the direct culture consumption (the number of book or newspaper readers, the number theatre and cinema goers) has dropped. The ownership structure of the cultural institutions has changed; a colourful new multi-player institutional structure has been developed. Private capital plays an increasing role in the sector, while foreign capital has appeared in some of the more profitable segments. Certain goods that were previously only available directly from the cultural institutions are now widely available for consumption - as a result of the wide-spread use of computers and the Internet - without having to go through cultural institutions at all. (i.e.: reading newspapers, books or listening to music via the Internet). Consequently, cultural products have become available even to those people who are not close to the cultural hubs. As a result of this trend, a simultaneous growth and reduction in culture consumers has been experienced.

The statistical data indicates that the collapse of previous structures – before the political transformation and the developmental process of the new structures shown in the statistical data for the decline as well – have ended. The stabilization process of the cultural sphere has started and must continue for years to come.

Following international trends in many areas, the structure of the cultural supply has shifted towards a less intellectually demanding type of product and light entertainment genre. At the same time the leisure activities of the Hungarian public have been transformed, but this change is not necessarily for the better.