

# **ECONOMIC CONTRIBUTION OF COPYRIGHT-BASED INDUSTRIES IN FINLAND 2005 – 2008**



**FINNISH COPYRIGHT SOCIETY**  
Finnish Copyright Institute

**MINISTRY OF EDUCATION  
AND CULTURE**

**TURKU SCHOOL OF ECONOMICS**  
Business and Innovation Development BID

## **ECONOMIC IMPORTANCE OF COPYRIGHT-BASED INDUSTRIES IN FINLAND 2005 – 2008**

The study was commissioned in co-operation by the Finnish Ministry of Education and Culture and the Finnish Copyright Society, it was carried out by Business and Innovation Development BID, at Turku School of Economics. Mr. Mikko Grönlund, Head of Research, Mr. Veijo Pönni and Mr. Timo E. Toivonen, Researchers, and Mr Petteri Sinervo, Head of Development, were responsible for the practical implementation of the study under the supervision of Professor Antti Paasio, Director of the School.

### **THE FINNISH COPYRIGHT SOCIETY**

Suomen Tekijänoikeudellinen Yhdistys ry  
Upphovsrättsliga Föreningen i Finland rt  
Established 1965

The Finnish Copyright Institute was founded in 1993 as a library, information service, research and publication division within the Finnish Copyright Society.

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## Executive Summary

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Copyrighted works have important social and cultural functions in contemporary societies. Works protected by copyright and industries that exploit copyrighted materials are also important factors from an economic perspective. Copyrighted works contribute to their surrounding economy during the process in which they are created, reproduced, distributed and used. Hence, it can be stated that the creation of a work is merely the starting point in its exploitation as it can also act as an input for other activities. Recent studies have even shown that the economic contribution of the so-called copyright-based industries can exceed that of traditional industries.

The purpose of the present study was threefold:

- To measure the economic contribution of copyright-based industries to the Finnish economy in 2005, 2006, 2007 and 2008.
- To provide insight into the World Intellectual Property Organization (WIPO) methodology employed in this measurement.
- To compare Finnish findings to the results of similar studies completed in other countries.

The key findings and conclusions of the study include the following:

- The combined value added of copyright-based industries represented 4.73 percent of the Finnish gross domestic product (GDP) in 2008 and amounted to €8.72 billion.
- The combined number of employees in the copyright-based industries amounted to 129,496 and represented 5.12 percent of total employment in Finland.
- From the year 2000 to the year 2008 the economic contribution of core copyright industries has shown a moderate but clear growth.
- The combined value added of core copyright industries represented 3.70 percent of the Finnish GDP in 2008 (3.28 percent in 2000) amounting to €6.82 billion.
- Compared to the Finnish GDP growth of 17 percent between 2005 and 2008, the value added of core copyright industries in absolute terms grew by 20 percent.
- In 2008, the two largest core copyright industries, software and databases, and press and literature, accounted for approximately 80 percent of the cumulative value added of the core copyright industries in Finland.
- From 2005 to 2008, the most prominent growth in value creation in core copyright industries took place in the software industry and in advertising whereas the relative contribution of the printing and publishing industry decreased.
- The relative proportion of workforce in the core copyright industries increased slightly during the same period. The total number of employees in the core copyright industries increased by 8.4 percent, while the employed labour force in Finland grew by 3.6 percent.
- In 2008, the interdependent copyright industries had a combined value added of €875 million (0.47% of GDP) and employed 10,933 employees (0.43 % of the total labour force).
- Production and sales in the paper industry amounted to 70 percent of the total value added of the interdependent copyright industries in 2008.
- Exports of copyrighted works relating to core copyright industries amounted to €7 085 million in 2008, representing 10.8 percent of Finland's total exports. The respective value of the imports was €4,754 million, which amounted to 7.6 percent of total imports. This produced a trade surplus of €2,331 million.
- Exports relating to interdependent copyright industries totalled €2,961 million in 2008. Approximately 75 percent of the total value of exports was attributable to the paper industry.
- The WIPO Guide on Surveying the Economic Contribution of the Copyright-Based Industries has enabled a very useful increase in the comparability of studies made in different countries. Further development of the methodology through international cooperation and national research will allow to even more accurately capture the economic contribution of copyright-based industries and harmonise research methods to allow latter comparisons. Finland ranks high when it comes to the contribution of the core copyright industries but lower in terms of overall copyright contribution due to the various copyright factors applied in the national research.

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# 1. Introduction

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During recent decades intellectual property has received increasing attention in post-industrial economies and it is gradually receiving more attention in developing economies. Intangible factors are regarded as key value-drivers in economies and intangible assets or intellectual capital are estimated to form the essence of many companies' competitive advantage. Materials protected by copyright<sup>1</sup> therefore form an integral part of a company's intellectual assets. As a source of economic activity and wealth the importance of copyright has increased and, due to the increase in digital technology, the scope of the subject matter for copyright protection has expanded. Those factors, together with a rapid increase in the amount of digitised products and services, have boosted the industries and businesses relying on a subject matter protected by copyright. Economists now broadly share the opinion that industrialised economies have transformed into knowledge-based economies and that intangible goods and services form the basis of growth and development.

Copyright is a legal concept that enables the creators of copyright protected materials to exploit economic values related to their creative work. The legislation defines the requirements for an outcome of creative work to be covered by copyright. The legislation also determines the exclusive rights of the creator and specifies the protective instruments that can be used to enforce the copyright owner's rights. The concept of copyright, as well as the protective elements, has been the subject of international treaties for a relatively long time now. The most well-established and important international treaties governing copyrights are the Berne Convention (1886), the Rome Convention (1961) and the TRIPS Agreement (Trade-Related Aspects of Intellectual Property Rights, 1994) of the World Trade Organization. The more recent ones, the WIPO Copyright Treaty (WCT) of 1996 and the WIPO Performances and Phonograms Treaty (WPPT), additionally adjusted the international dimensions of copyright. There are differences between different countries on the issue of copyright legislation. However, the international treaties have harmonised the legislation. Especially when it comes to the core substance, the concept of copyright is considered nearly similarly in different countries and legislations.

Traditionally copyright has been mainly considered and studied from its legal perspective. Legal research has covered areas like the nature of copyright, the scope of its protection and enforcement and infringement. From the business point of view copyright transfers, licensing, international trade with copyright products and copyright investments have received attention from researchers. Research addressing the economic importance or impact of copyright first emerged in the 1970s. The first studies were published in the USA (1977), Canada (1977), Australia (1981), Sweden (1982), the Netherlands (1982) and the UK (1982). Several other studies followed thereafter and research on the economic contribution of copyright has been extended in the 1990s. Currently, over 30 countries around the world have engaged in surveying the economic performance of their copyright sector.

Research addressing the economic contribution of copyright has broadly adopted a similar kind of methodology. Namely identifying industries that are related to or dependent on copyright and then calculating the contribution of those industries to the value added and employment aspects of the economy. However, there were clear differences in the applied methodology, especially as the industries included varied, which made the comparison of the findings difficult. The Finnish Ministry of Education acted as an initiator when, in 2002, the World Intellectual Property Organization (WIPO) launched an initiative to "develop a practical instrument in the form of guidelines, recommendations and survey methods to be considered and applied when undertaking surveys with regard to the size and economic contribution of a nation's creative and information sector; and to establish a basis for comparison of future surveys built on reliable data and common methodologies". The WIPO Guide on Surveying the Economic Contribution of the Copyright-Based Industries was published in 2003. Since then the methodology defined in the WIPO Guide has been widely adopted. (WIPO Guide 2003)

The scope of the WIPO Guide is confined to surveying the economic contribution of copyright-based industries and to providing quantifiable characteristics for this contribution. The WIPO Guide addresses the three main indicators of the size of these industries: the value added generated by them, their share in employment and their contribution to foreign trade. It outlines the methodology of the survey, justifies the choice of indicators,

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<sup>1</sup>In this study the term copyright is used to cover both the actual copyright and the related or neighbouring rights.

describes their characteristics and elaborates on existing approaches to their measurement. The methodology in the WIPO Guide does not address all economic aspects related to the functioning of copyright. For instance, the economic impact of copyright law itself, measuring the social effects of copyright, the valuation of the copyright assets of enterprises and the assessment of the effects of copyright piracy are left for additional research and methodological development. (WIPO Guide 2003)

The economic contribution of copyright industries has been previously addressed in four studies in Finland: 1984, 1991 (using data from 1988), 2000 (1997 data) and 2008 (using data from 2000, 2003, 2004 and 2005). The first three were published before the WIPO Guide and thus could not exploit its guidelines but they used a similar approach. The last one was published in 2008 and partially used the WIPO guidelines but, in parallel, applied the methodology of the 1997 study and presented two sets of results. The current study will apply solely and fully the WIPO methodology.

The report is structured as follows. Chapter 3 presents the most important findings on the economic volume of copyright industries in terms of value added and employment. The trade balance of copyrighted goods and services is presented in Chapter 4. Chapter 5 presents the findings on Finnish copyright collective management organisations' economic activities. In Chapter 6 the results of this study are compared with findings in other countries. In Appendix 1 is presented detailed information concerning the definition of copyright-based industries and the copyright factors used for this study.

This study was initiated and commissioned by the Finnish Copyright Society and the Ministry of Education and Culture. The purpose of the study is to measure the economic contribution of copyright-based industries from 2005 to 2008 by applying the methodology defined in the WIPO Guide on Surveying the Economic Contribution of the Copyright-Based Industries.



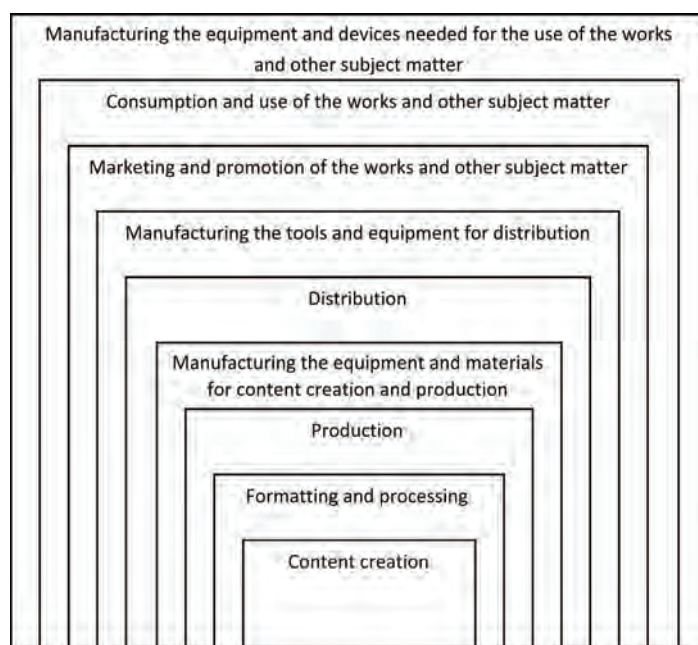
## 2. The Copyright-based Industries and the Methodology of the Study

### 2.1 The Copyright-based Industries

The mental process or creative work needed to produce copyrighted subject matter is the initial act of creating economic value out of copyright protected materials. In a legal sense copyright is a private property right. It contains the right to exclude others from using the property. In addition, the holding of a property right means that copyright protected materials acquire a value which enables it to be measured. It also enables copyright protected materials to be traded and ensures it can be used in all areas of economic life (WIPO Guide 2003).

The creation process of copyright protected materials only forms the basic element relevant for the copyright's economic contribution. The works need to be modified, packaged, reproduced and distributed<sup>2</sup> in order to be used by consumers. When assessing the economic value of copyright one must distinguish between a work which is protected by copyright and the "means of delivery" by which the work appears on the market and is made available for consumption (WIPO Guide 2003). When measuring the economic contribution of copyright protected materials one should include all the activities resulting from the multiple effects of copyright on the economy, those of the creators, the right holders, the distributors, users, equipment manufacturers, advertisers, etc. (WIPO Guide 2003). Figure 1 describes the activities related to the production, distribution and use of copyright protected materials. With respect to the copyright-based industries they can be viewed as layers of economic activities from which the effects of copyright radiate outwards as shown in Figure 1. Obviously the activities related to the production, distribution and use of copyrighted works are not the same for all works. The works are different in nature and different means are needed in both production and use.

**Figure 1: Layers of economic activities related to the production, packaging and distribution of materials protected by copyright and related rights (Sinervo & Picard 2000).**



Defining the copyright-based industries is a primary task when measuring the economic contribution of copyright. This means that one has to decide which industries are going to be studied and then to arrange them into appropriate categories according to the extent to which their activities are based on copyright. The WIPO Guide 2003 categorises the copyright-based industries into four main groups, namely, the core copyright industries, the interdependent copyright industries, the partial copyright industries and the non-dedicated support industries.

<sup>2</sup> The term distribution is used in this study in a technologically neutral way to refer to all distribution, dissemination, diffusion, communication or making available the protected subject matter to the public.

The core copyright industries are industries that are wholly engaged in the creation, production and manufacturing, performance, broadcast, communication and exhibition, or distribution and sales of works and other protected subject matter. These industries include, for example, press and literature, motion pictures, recorded music, music publishing, radio and television broadcasting and software.<sup>3</sup>

Interdependent copyright industries are industries that are engaged in the production and the manufacture and sale of equipment whose function is wholly or primarily to facilitate the creation, production or use of core copyright industry works and other protected subject matter. Examples of industries in this category include the manufacturing, wholesaling and retailing of TV sets and radios, CD and DVD players, computers, musical instruments, photographic instruments, photocopiers, recording material and paper.

The partial copyright industries are industries in which a portion of the activities is related to works and other protected subject matter and may involve creation, production and manufacturing, performance, broadcast, communication and exhibition, or distribution and sales. Industries like textiles and footwear, jewellery, furniture, wall coverings and carpets, toys and games, architecture, engineering and museums represent some of the partial copyright industries.

The non-dedicated support industries are industries in which a portion of the activities is related to facilitating broadcast, communication, distribution or sales of works and other protected subject matter whose activities have not been included in the core copyright industries. For example transportation services, telecommunications and wholesale and retail trade fall into this category.

When measuring the economic contribution of copyright industries the core copyright industries are fully included in the calculations. This means that the total contribution of the core copyright industries to the value added and creation of employment are counted in when calculating the total effect of the copyright industries on a country. When it comes to the other three categories only part of their activities are related to copyright protected material. Therefore judgement must be applied when measuring their effect on the national economy. Thus, only the portion which is directly attributable to copyright protected material is included. This is worked out according to so called copyright factors, which are discussed below.

## 2.2 Establishing of Copyright Factors

One challenge of the study was to calculate the contribution of the interdependent, partial and non-dedicated support industries because, unlike the core copyright industries, these industries cannot be fully ascribed to the copyright-based economy. Calculations regarding interdependent copyright industries, partial copyright industries and non-dedicated support industries involve the use of so-called copyright factors, which implies the weighting of the portion of a specific industry that can be attributed to copyright or the level of its dependence on copyright.

Guidelines for shaping copyright factors may be sought from existing studies conducted in other countries. By the year 2009 seventeen other countries (presented in Table 25) had conducted surveys in accordance with the WIPO Guide. Thus, these studies are most likely to be comparable with the results of the Finnish study. Table 25 demonstrates that the available studies are not only carried out in developed economies but also in a number of emerging economies and economies in transition. A major difference is that most developing countries have a limited number of official statistics available and make use of their own surveys and proxies.<sup>4</sup> At the time of this study there were only five studies in European Union countries that followed the WIPO Guide namely Bulgaria, Hungary, Latvia, the Netherlands and Romania. In this study copyright factors are based on the reasoning used and data gained from three national studies in Singapore<sup>5</sup>, Hungary<sup>6</sup> and the Netherlands.<sup>7</sup>

<sup>3</sup>A complete list of industries included to the four principal categories is in Appendix 1.

<sup>4</sup>Leenheer, Jorna, Bremer, Simon & Theeuwes, Jules (2008) The Economic Contribution of Copyright Industries to the Netherlands, SEO Economic Research., SEO Report no. 2008-60.A, p. 13.

<sup>5</sup>To determine its copyright factors researchers in Singapore conducted a survey among 104 companies.

<sup>6</sup>In the Hungarian study researchers used the same copyright factors that were used in the United States in 1990 and adapted them slightly to their national circumstances. It is unclear if the same copyright factors are still used in the United States because the USA does not make the copyright factors used publicly available.

<sup>7</sup>The Dutch study decided to follow Singaporean and Hungarian studies because conducting a national survey is time-consuming and achieving a good response rate is difficult (in Singapore the response rate was only 4%). According to the Dutch study Singapore and Hungary do not differ much in their copyright factors for the partial and non-dedicated industries. Leenheer, Jorna, Bremer, Simon & Theeuwes, Jules (2008) The Economic Contribution of Copyright Industries to the Netherlands, SEO Economic Research., SEO Report no. 2008-60.A, pp. 26-27.

### 2.2.1 Core copyright industries

It is generally recognized that certain industries are more closely connected to and dependent on copyright than others. Some industries fundamentally exist in order to produce copyright materials<sup>8</sup> for ultimate consumption in local, national and global economies. Therefore one can assume that all core copyright industries' activities are related to copyright-protected products.

**Table 1: Copyright factors of the core copyright industries**

	Copyright factors			
	Finland	The Netherlands	Singapore	Hungary
Press and literature	100%	100%	100%	100%
Music, theatrical productions, operas	100%	100%	100%	100%
Motion picture and video	100%	100%	100%	100%
Radio and television	100%	100%	100%	100%
Photography, visual and graphic arts	100%	100%	100%	100%
Software and databases	100%	100%	100%	100%
Advertising	100%	100%	100%	100%
Copyright relevant organisations	100%	100%	100%	100%

\* A detailed table of the core copyright industries is shown in Appendix 1.

### 2.2.2 Interdependent copyright industries

The Hungarian study took all interdependent industries as 100 percent dependent on copyright based on expert assessments. The Singaporean study used copyright factors that varied between 20 and 35 percent. Including interdependent copyright industries up to 100 percent is less valid in terms of content because some industries in this category clearly have a wider scope than focusing on solely copyright-based activities. The study conducted in the Netherlands used the same copyright factors as the Singaporean study. These studies currently provide the best guidelines. In this study researchers used the same copyright factors that were used in the national studies of Singapore and the Netherlands as this presents a more conservative approach. The copyright factors used are presented in Table 2.

**Table 2: Copyright factors of interdependent copyright industries**

	Copyright factors			
	Finland	The Netherlands	Singapore	Hungary
TV sets , radios, VCRs, CD and DVD players, electronic game equipment	35%	35%	35%	100%
Computers and equipment	35%	35%	35%	100%
Musical instruments	20%	20%	20%	100%
Photographic and cinematographic instruments	30%	30%	30%	100%
Photocopiers	30%	30%	30%	100%
Blank recording material	25%	25%	25%	100%
Paper	25%	25%	25%	100%

\* A detailed table of the interdependent copyright industries is shown in Appendix 1.

### 2.2.3 Partial copyright industries

Hungary's copyright factors per industry varied between 0.5 percent and 50 percent, they had an average of 8 percent. Singapore's copyright factors per industry varied between 0.4 percent and 42 percent, they had an average of 7 percent. The Dutch study used the average values of Hungary and Singapore as its copyright factors. Dutch copyright factors per industry varied between 0.5 percent and 50 percent, they had an average of 7 percent. As there are a lot of social and economic similarities between Finland and the Netherlands the

<sup>8</sup>Towse, Ruth , "Cultural Economics, Copyright and the cultural industry", proceedings from the conference "The Long Run" at Erasmus University, Rotterdam, February 2000, p. 113.

copyright factors of the Dutch study were used in this study. An overview of the national copyright factors of the partial copyright industries can be found in Table 3.

**Table 3: Copyright factors of the partial copyright industries**

	Copyright factors			
	Finland	The Netherlands	Singapore	Hungary
Apparel, textiles and footwear	0.5%/2.7%	0.5%/2.7%	0.4%	0.5%/5%
Jewellery and coins	33.5%	33.5%	42%	25%
Other crafts	41%	41%	42%	40%
Furniture	6.7%	6.7%	8.3%	5%
Household goods, china and glass	0.55%	0.55%	0.6%	0.5%
Wall covering and carpets	1.9%	1.9%	1.7%	2%
Toys and games	46%	46%	42%	50%
Architecture, engineering, surveying	9%	9%	8.3%	10%
Museums	50%	50%	Not included	50%

\* A detailed table of the copyright factors of the partial copyright industries of the Finnish study is shown in Appendix 1.

#### 2.2.4 Non-dedicated support industries

The Hungarian study used a copyright factor of 5.7 percent for all non-dedicated support industries. The Singaporean study used a copyright factor of 6.4 percent. The Dutch study used an average of the Hungarian and Singaporean studies (6.0%) as the copyright factor for all non-dedicated support industries. The copyright factor for the non-dedicated support activities of the Dutch study was used in this study. An overview of the national copyright factors of the non-dedicated support industries can be found in Table 4.

**Table 4: Copyright factors of the non-dedicated support industries**

	Copyright factors			
	Finland	The Netherlands	Singapore	Hungary
All non-dedicated support industries	6.0%	6.0%	6.4%	5.7%

\* A detailed table of the copyright factors of the non-dedicated support industries of the Finnish study is shown in Appendix 1

## 2.3 Collection of Data

The data was predominately collected from corporate annual statement's statistics collected by Statistics Finland.

The turnover is the combined operating income of an industry and the value added is calculated by subtracting the intermediate goods and services from the turnover. The value added therefore represents the value created by the factors of the production of that industry. The number of employees is presented as full time equivalents showing the actual person's years invested in the production in an industry.

The firms are classified under statistical categories according to their main activities. Therefore there are activities within the firms that may vary from the activity according to which they are categorised. There is no external reporting of the value of a firm's activities in different fields. Therefore both the share of the non-copyright related activities of firms in copyright industries and the copyright activities of firms in non-copyright industries cannot be assessed.

Complementary data sources have been used when statistical information has been missing or activities have not been captured in the statistical categories. The use of complementary sources has been conducted in accordance with the WIPO Guide. The chosen complementary data come from sources that are published annually. This has been done for the benefit of the consistency of the time series. The main sources of complementary data have been the Finnish Cultural Statistics, recording industry statistics and collective rights management organisations' statistics. The values of the foreign trade of copyrighted goods and services come from Finnish Foreign Trade Statistics. In some cases, when turnover values have been available but value added values missing, value added estimations have been made using a sample survey of the industry from the Orbis database. The value added has been calculated using the median turnover to value added ratio. However, there are some significant analytical challenges resulting from the current statistical categorisation which makes it difficult to attribute the activities to the relevant copyright activity categories. The implementation of a new European statistical classification (NACE rev. 2 and the national classifications that have been reformed accordingly) will possibly solve some of these issues.

### 3. The Economic Contribution of Copyright-based Industries in Finland

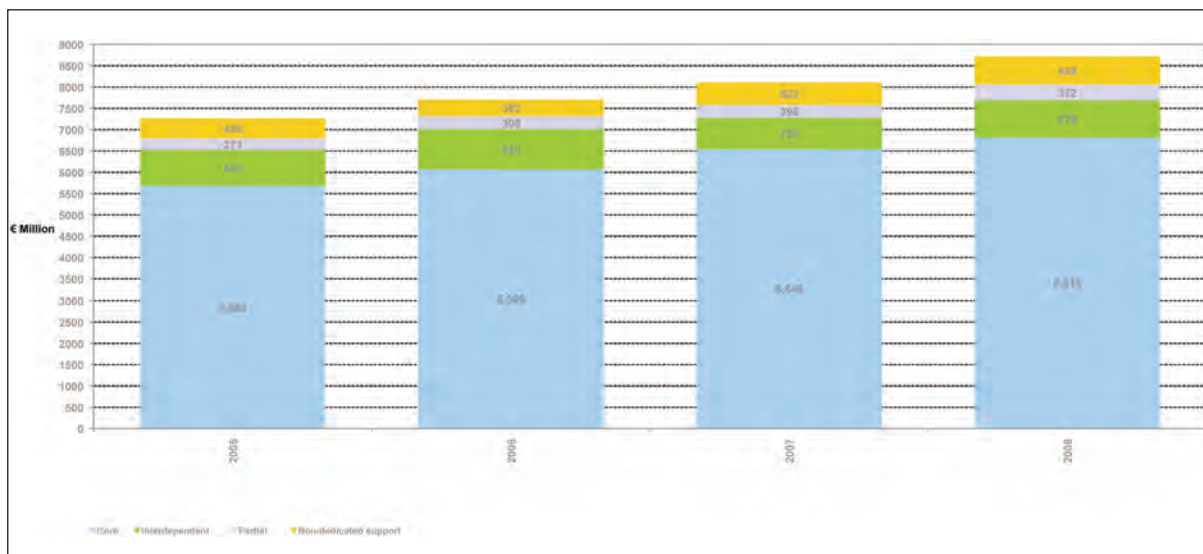
This section presents the figures for the copyright-based industries in Finland. Data from these industries was gathered for the years 2005, 2006, 2007 and 2008 based on the WIPO methodology (Appendix 1). Figure 2 illustrates the development of the value added of the copyright-based industries as a share of the annual GDP for these years.

As can be noted, the relative contribution of copyright-based industries to Finnish GDP has not changed notably during the years under examination; while in 2005 this contribution was of 4.62 percent, the respective figure for 2008 was 4.73 percent (Figure 2). The combined value added for copyright-based industries in 2005 was €7.27 billion, the figure for 2008 was €8.72 billion.

**Figure 2: Value added of the copyright-based industries as a share of GDP in %**

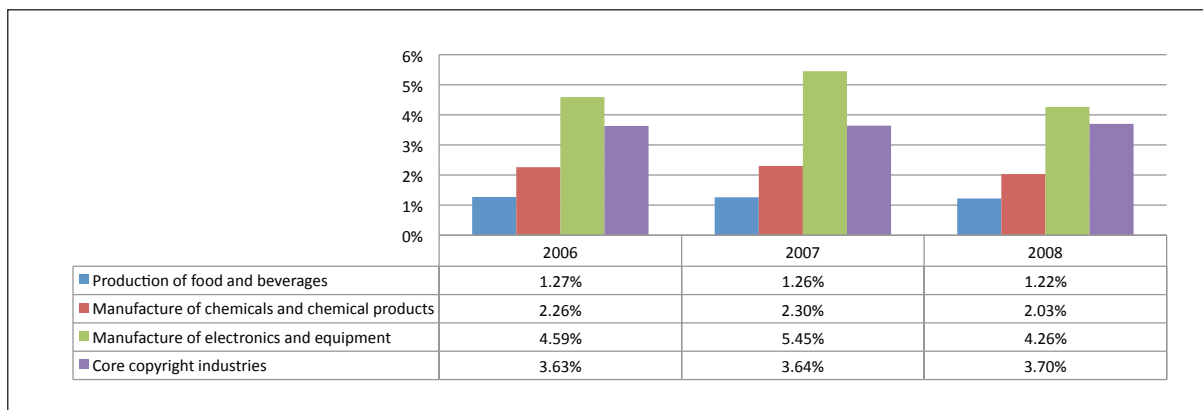


**Figure 3: Value added of the copyright-based industries, in € Million**



The core copyright industries in Finland contribute more to the GDP than the food, metal or machinery industries.

**Figure 4: Contribution of the core copyright industries to the GDP in comparison with other selected industries**



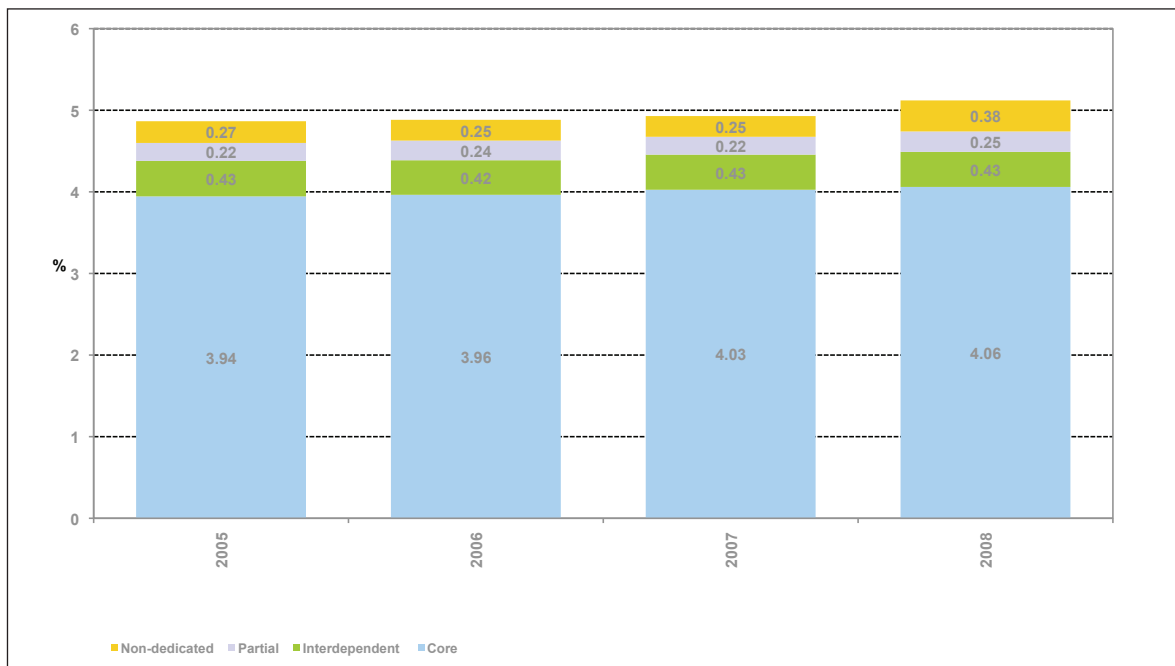
**Table 5: Value added of the copyright-based industries in Finland**

	Contribution to employment (in %)											
	2005			2006			2007			2008		
	Value added as % GDP	Total value added € Million	Value added as % GDP	Total value added € Million	Change in total value added %	Value added as % GDP	Total value added € Million	Change in total value added %	Value added as % GDP	Total value added € Million	Change in total value added %	
Core	3.61	5,680	3.63	6,069	6.8	3.64	6,546	7.9	3.70	6,815	4.1	
Interdependent	0.54	848	0.56	940	10.8	0.41	738	-21.5	0.47	875	18.6	
Partial	0.17	271	0.18	308	13.7	0.17	298	-3.2	0.20	372	24.8	
Non-dedicated	0.30	466	0.24	393	-15.7	0.29	522	32.8	0.36	658	26.1	
Total	4.62	7,265	4.61	7,710	6.1	4.51	8,105	5.1	4.73	8,720	7.6	

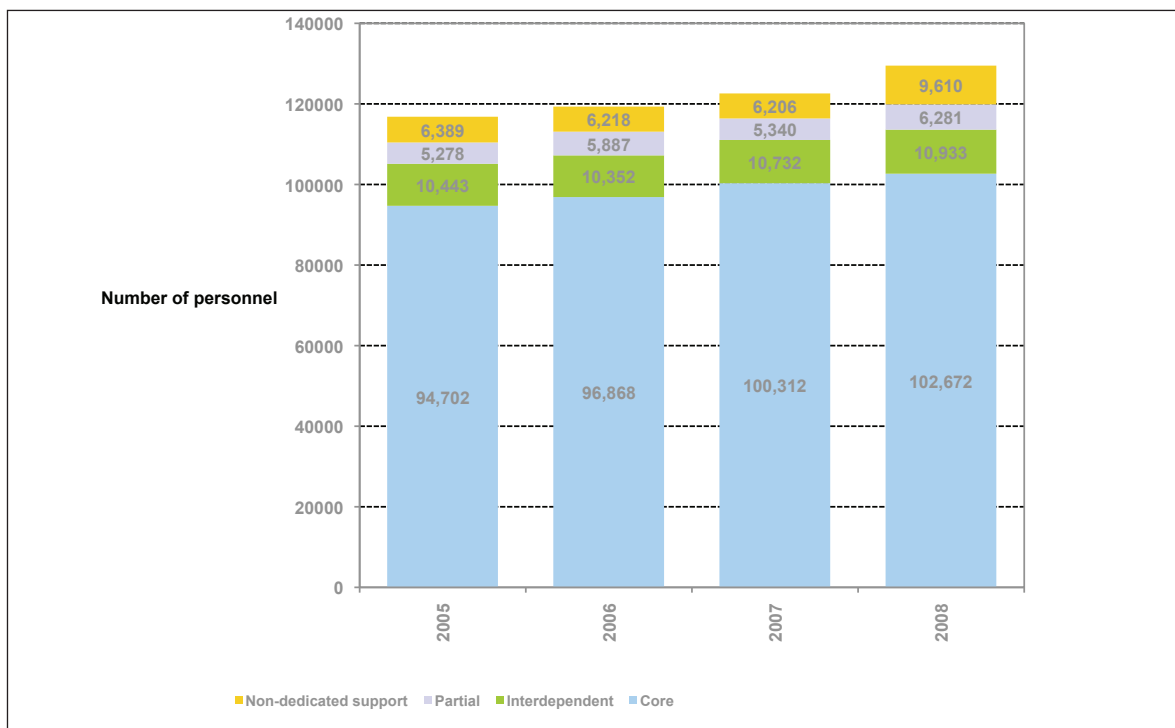


The combined number of employees in the copyright-based industries amounted to 116 811 in 2005 (4.87 percent of the total employed workforce). In 2008, the combined number of employees in the copyright-based industries amounted to 129,496 (5.12 percent of the total employed workforce). Figure 5 shows the development of employment in copyright-based industries as their share within the total workforce during the period under examination. The workforce figures were calculated using the copyright factors. Both the total number of employees in copyright-based industries and the relative proportion of this workforce slightly increased between 2005 and 2008. While the total number of employees in core copyright industries increased by 8.4 percent, the employed labour force in Finland grew by 3.6 percent. The activities increasing the relative share of the total workforce of core copyright industries were music, audiovisual, software and databases, and advertising.

**Figure 5: Employees in the copyright-based industries as a share of total employment in %**



**Figure 6: Number of employees in the copyright-based industries**



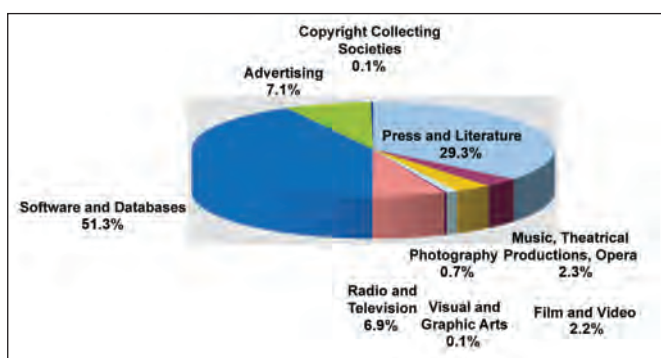
**Table 6: Employees in the copyright-based industries in Finland**

	Contribution to employment (in %)											
	2005			2006			2007			2008		
	Employees as % of total employment %	Total number of employees	Employees as % of total employment %	Total number of employees	Change in total employment %	Employees as % of total employment %	Total number of employees	Change in total employment %	Employees as % of total employment %	Total number of employees	Change in total employment %	
Core	3.94	94,702	3.96	96,868	2.3	4.03	100,312	3.6	4.06	102,672	2.4	
Interdependent	0.43	10,443	0.42	10,352	-0.9	0.43	10,732	3.7	0.43	10,933	1.9	
Partial	0.22	5,278	0.24	5,887	11.5	0.22	5,340	-9.3	0.25	6,281	17.6	
Non-dedicated	0.27	6,389	0.25	6,218	-2.7	0.25	6,206	-0.2	0.38	9,610	54.9	
Total	4.86	116,811	4.87	119,325	2.2	4.93	122,591	2.7	5.12	129,496	5.6	

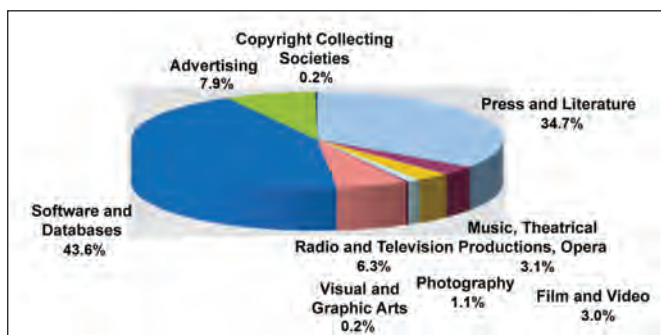
Figure 7 reveals that the total economic contribution of core copyright industries is not evenly distributed between different industries. In 2008, the two largest core copyright industries: software and databases, and press and literature, accounted for approximately 80 percent of the combined contribution of core copyright industries in terms of value added. In 2008, the largest core copyright industry, software and databases contributed the highest value added with 51.3 percent of the core copyright sectors. In second place, in terms of value added (29.3%) was press and literature. These two sub-sectors were followed by radio and television, and advertising for which the value added was approximately 7 percent each.

In 2008 the sub-sector software and databases comprised 44 percent of the total employment of the core copyright sectors. Press and literature accounted for 35 percent, advertising comprised approximately 8 percent and radio and television 6 percent of the total employment of the core copyright sectors.

**Figure 7: Breakdown of the value added of the core copyright industries into sub-sectors, 2008**



**Figure 8: Breakdown of the employment of the core copyright industries into sub-sectors, 2008**



**Table 7: Economic contribution of the copyright-based industries in Finland, 2005**

	Turnover (€ Million)	Value added (€ Million)	% of GDP	Employees	% of employed labour force
<b>Core copyright industries</b>					
Press and literature	4,956	1,991	1.26	36,581	1.52
Music, theatrical productions, opera	393	128	0.08	2,652	0.11
Film and video	415	115	0.07	2,492	0.10
Photography	96	41	0.03	921	0.04
Visual and graphic arts	23	7	0.00	206	0.01
Radio and television	964	412	0.26	6,318	0.26
Software and databases	5,710	2,612	1.66	38,916	1.62
Advertising	1,448	367	0.23	6,435	0.27
Copyright Collecting Societies	78	8	0.01	180	0.01
<b>Total core copyright industries</b>	<b>14,083</b>	<b>5,680</b>	<b>3.61</b>	<b>94,702</b>	<b>3.94</b>
<b>Interdependent copyright industries</b>					
TV sets, radios, VCRs, CD players, DVD players etc.	556	50	0.03	803	0.03
Computers and equipment	963	135	0.09	1 821	0.08
Musical instruments	16	3	0.00	79	0.00
Photographic and cinematographic instruments	48	5	0.00	109	0.00
Photocopiers	54	13	0.01	240	0.01
Blank recording material	14	1	0.00	36	0.00
Paper	2,813	640	0.41	7,356	0.31
<b>Total interdependent copyright industries</b>	<b>4,464</b>	<b>848</b>	<b>0.54</b>	<b>10,443</b>	<b>0.43</b>
<b>Partial copyright industries</b>					
Apparel textiles and footwear	57	14	0.01	367	0.02
Jewellery and coins	151	36	0.02	692	0.03
Other crafts	23	7	0.00	211	0.01
Furniture	112	33	0.02	773	0.03
Household goods, china and glass	7	2	0.00	43	0.00
Wall coverings and carpets	3	1	0.00	18	0.00
Toys and games	150	31	0.02	559	0.02
Architecture, engineering, surveying	291	147	0.09	2,615	0.11
<b>Total partial copyright industries</b>	<b>794</b>	<b>271</b>	<b>0.17</b>	<b>5,278</b>	<b>0.22</b>
<b>Non-dedicated support industries</b>					
General wholesale and retailing	699	116	0.07	2,036	0.08
General transportation	634	244	0.16	3,120	0.13
Telephony and internet	396	106	0.07	1,236	0.05
<b>Total non-dedicated support industries</b>	<b>1,730</b>	<b>466</b>	<b>0.30</b>	<b>6,392</b>	<b>0.27</b>

**Table 8: Economic contribution of the copyright-based industries in Finland, 2006**

	Turnover (€ Million)	Value added (€ Million)	% of GDP	Employees	% of employed labour force
<b>Core copyright industries</b>					
Press and literature	5,077	2,037	1.22	36,065	1.48
Music, theatrical productions, opera	427	127	0.08	2,794	0.11
Film and video	393	123	0.07	2 617	0.11
Photography	103	44	0.03	977	0.04
Visual and graphic arts	19	6	0.00	195	0.01
Radio and television	1,009	415	0.25	6 316	0.26
Software and databases	6,430	2,906	1.74	40,910	1.67
Advertising	1,530	400	0.24	6,811	0.28
Copyright Collecting Societies	80	9	0.01	184	0.01
<b>Total core copyright industries</b>	<b>15,068</b>	<b>6,069</b>	<b>3.63</b>	<b>96,868</b>	<b>3.96</b>
<b>Interdependent copyright industries</b>					
TV sets, radios, VCRs, CD players, DVD players etc.	486	52	0.03	1,034	0.04
Computers and equipment	981	149	0.09	1,984	0.08
Musical instruments	16	4	0.00	80	0.00
Photographic and cinematographic instruments	66	11	0.01	147	0.01
Photocopiers	77	14	0.01	249	0.01
Blank recording material	11	1	0.00	35	0.00
Paper	3,222	710	0.43	6,823	0.28
<b>Total interdependent copyright industries</b>	<b>4,859</b>	<b>940</b>	<b>0.56</b>	<b>10,352</b>	<b>0.42</b>
<b>Partial copyright industries</b>					
Apparel textiles and footwear	75	20	0.01	479	0.02
Jewellery and coins	164	40	0.02	780	0.03
Other crafts	26	8	0.00	225	0.01
Furniture	113	34	0.02	764	0.03
Household goods, china and glass	6	2	0.00	42	0.00
Wall coverings and carpets	3	1	0.00	19	0.00
Toys and games	173	39	0.02	812	0.02
Architecture, engineering, surveying	323	164	0.10	2,768	0.11
<b>Total partial copyright industries</b>	<b>882</b>	<b>308</b>	<b>0.18</b>	<b>5,887</b>	<b>0.24</b>
<b>Non-dedicated support industries</b>					
General wholesale and retailing	697	111	0.07	1,575	0.06
General transportation	671	166	0.10	3,141	0.13
Telephony and internet	395	124	0.07	1,077	0.04
<b>Total non-dedicated support industries</b>	<b>1,763</b>	<b>402</b>	<b>0.24</b>	<b>5,793</b>	<b>0.24</b>

**Table 9: Economic contribution of the copyright-based industries in Finland, 2007**

	Turnover (€ Million)	Value added (€ Million)	% of GDP	Employees	% of employed labour force
<b>Core copyright industries</b>					
Press and literature	4,981	2 006	1.12	36,053	1.45
Music, theatrical productions, opera	552	147	0.08	3,153	0.13
Film and video	471	167	0.09	3,297	0.13
Photography	104	47	0.03	1,014	0.04
Visual and graphic arts	23	6	0.00	197	0.01
Radio and television	1,086	482	0.27	6,481	0.26
Software and databases	7,054	3 206	1.78	42,196	1.69
Advertising	1,616	475	0.26	7,738	0.31
Copyright Collecting Societies	85	9	0.01	184	0.01
<b>Total core copyright industries</b>	<b>15,973</b>	<b>6,546</b>	<b>3.64</b>	<b>100,312</b>	<b>4.03</b>
<b>Interdependent copyright industries</b>					
TV sets, radios, VCRs, CD players, DVD players etc.	522	64	0.04	1,192	0.05
Computers and equipment	1,231	170	0.09	2,336	0.09
Musical instruments	15	3	0.00	78	0.00
Photographic and cinematographic instruments	67	8	0.00	127	0.01
Photocopiers	79	14	0.01	258	0.01
Blank recording material	11	1	0.00	35	0.00
Paper	3,366	477	0.27	6,706	0.27
<b>Total interdependent copyright industries</b>	<b>5,291</b>	<b>738</b>	<b>0.41</b>	<b>10,732</b>	<b>0.43</b>
<b>Partial copyright industries</b>					
Apparel textiles and footwear	81	21	0.01	512	0.02
Jewellery and coins	166	29	0.02	576	0.03
Other crafts	0	0	0.00	0	0.00
Furniture	118	34	0.02	720	0.03
Household goods, china and glass	7	2	0.00	42	0.00
Wall coverings and carpets	4	1	0.00	21	0.00
Toys and games	184	27	0.02	500	0.02
Architecture, engineering, surveying	374	183	0.10	2,969	0.12
<b>Total partial copyright industries</b>	<b>935</b>	<b>298</b>	<b>0.17</b>	<b>5,340</b>	<b>0.22</b>
<b>Non-dedicated support industries</b>					
General wholesale and retailing	798	127	0.07	1 553	0.06
General transportation	669	267	0.15	3 568	0.15
Telephony and internet	337	128	0.07	1 038	0.04
<b>Total non-dedicated support industries</b>	<b>1 804</b>	<b>522</b>	<b>0.29</b>	<b>6 159</b>	<b>0.25</b>

**Table 10: Economic contribution of the copyright-based industries in Finland, 2008**

	Turnover (€ Million)	Value added (€ Million)	% of GDP	Employees	% of employed labour force
<b>Core copyright industries</b>					
Press and literature	5,003	1,995	1.08	35,604	1.41
Music, theatrical productions, opera	532	156	0.08	3,222	0.13
Film and video	510	149	0.08	3,039	0.12
Photography	113	51	0.03	1,125	0.04
Visual and graphic arts	22	6	0.00	204	0.01
Radio and television	1,076	471	0.26	6,433	0.25
Software and databases	7,558	3,492	1.90	44,750	1.77
Advertising	1,662	484	0.26	8,128	0.32
Copyright Collecting Societies	–	9	0.00	166	0.01
<b>Total core copyright industries</b>	<b>16 476</b>	<b>6 815</b>	<b>3.70</b>	<b>102 672</b>	<b>4.06</b>
<b>Interdependent copyright industries</b>					
TV sets, radios, VCRs, CD players, DVD players etc.	507	63	0.03	1,169	0.05
Computers and equipment	1,254	170	0.09	2,323	0.09
Musical instruments	16	4	0.00	82	0.00
Photographic and cinematographic instruments	65	6	0.00	115	0.00
Photocopiers	78	14	0.01	253	0.01
Blank recording material	17	1	0.00	35	0.00
Paper	3,288	616	0.33	6,957	0.27
<b>Total interdependent copyright industries</b>	<b>5,226</b>	<b>875</b>	<b>0.47</b>	<b>10,933</b>	<b>0.43</b>
<b>Partial copyright industries</b>					
Apparel textiles and footwear	83	23	0.01	511	0.02
Jewellery and coins	180	45	0.02	812	0.03
Other crafts	33	11	0.01	238	0.01
Furniture	118	37	0.02	723	0.03
Household goods, china and glass	9	3	0.00	51	0.00
Wall coverings and carpets	3	1	0.00	20	0.00
Toys and games	198	48	0.03	828	0.03
Architecture, engineering, surveying	421	204	0.11	3,098	0.12
<b>Total partial copyright industries</b>	<b>1,046</b>	<b>372</b>	<b>0.20</b>	<b>6,281</b>	<b>0.25</b>
<b>Non-dedicated support industries</b>					
General wholesale and retailing	1,003	163	0.09	2,328	0.09
General transportation	1,030	367	0.20	6,283	0.25
Telephony and internet	323	128	0.07	999	0.04
<b>Total non-dedicated support industries</b>	<b>2,356</b>	<b>658</b>	<b>0.36</b>	<b>9,610</b>	<b>0.38</b>

## 4. Collective Management Organisations

The main function of collective management organisations (CMOs)<sup>9</sup> is to collect copyright royalties and payments for the specific uses of copyrighted works and to distribute these revenues as remunerations to the right-holders for the use of their works. Currently there are six collective management organisations operating in Finland: Gramex (representing performing artists whose performances have been recorded on phonograms and producers of phonograms), Kopiosto (representing authors, photographers, performing artists and publishers), Kuvasto (representing visual artists), Teosto (representing composers, lyricists, arrangers and music publishers), Tuotos (representing audiovisual producers) and Sanasto (representing the authors and translators of literary works).

Sanasto is the only one of these six collecting societies that did not collect copyright remunerations between 2005 and 2007. In 2008 Sanasto was approved by the Ministry of Education and Culture as an organisation to collect remunerations for lending from public libraries to be distributed to authors. The first payment of royalties was received in 2008 and was distributed in March 2010. Teosto also collects private copying levies (fair compensation) for private copying via its Private Copying Unit (Hyvitysmaksuyksikkö). The Government decides the scope and amount of the levy and the Ministry of Education and Culture confirms the plan of distribution of the collected payments among various right-owners.

For the purposes of this study, data on collective management societies was collected from Culture Statistics published by Statistics Finland and directly from the collecting societies and their annual reports. However, there are some differences in the form in which the figures are reported depending on the organisation and year in question. Thus, it is challenging to compile a comparable and complete time series of these royalty flows which should be considered when referring to these figures. Table 11 shows the royalty flows of the Finnish collective management organisations in 2008. As the copyright society Sanasto did not have collected royalties until 2008, its activities are not included in the calculations.<sup>10</sup>

**Table 11: Royalties collected and distributed by the collective management organisations in 2008**

(€1,000) (Source: the annual reports of the copyright collecting societies)

	Gramex	Kopiosto	Kuvasto	Teosto	Tuotos	Total
Royalties collected	18,134	23,648	443	42,064	927	85,216
from Finland	17,749	23,241	407	39,017	869	81,283
from abroad	385	407	36	3,047	59	3,933
Royalties distributed	14,973	20,179	432	34,776	424	70,784

\* Gramex figures include also the national and international distribution of remunerations from earlier years.

Collective rights management organisations distribute the major portion of the collected royalties and payments to the respective right-holders. Remunerations are normally distributed at least 6 months after royalties are collected but in some cases it happens in the following year or even later. Teosto for example distributes remunerations five times in a year. This may lead to a situation where the annual distributed amount of remunerations is bigger than the collected amount of royalties. Gramex is a good example of this, since the annual distribution has been higher than collected remunerations during years 2005 to 2007, simply because distribution includes also remunerations from earlier years. The ratio between remunerations distributed and royalties collected differs between different organisations varying from 46 percent to 98 percent in 2008 (Table 16). The relatively low ratio of Tuotos is explained by the previously mentioned time shift between collection and distribution of remunerations.

Part of the royalties collected by Gramex is distributed collectively through ESEK (The Finnish Performing Music Promotion Centre) as grants for performers of musical works and as financial support for phonogram production, live music projects and production of audiovisual music programmes about Finnish artists or composers. A similar organisation is AVEK (The Promotion Centre for Audiovisual Culture) which is a part of

<sup>9</sup>Referred to in the WIPO Guide as copyright collective management societies or copyright collecting societies

<sup>10</sup>Sanasto started to distribute collected royalties for the first time in March 2010 and therefore is out of the scope of this study.



Kopioisto. AVEK is mostly funded by the copyright levy of blank recordable media. Furthermore, the portion of distributed remunerations has slightly decreased in certain societies and increased in others between 2005 and 2008. Although entirely comparable figures of royalty flows over time are hard to come by, on a general level it can be stated that the amounts of royalties both collected and distributed increased between 2005 and 2008.

**Table 12: Ratio between remunerations distributed and royalties collected by copyright societies as a percentage 2005 - 2008**

	2005	2006	2007	2008
Gramex	109.1	110.9	101.7	82.6
Kopioisto	88.7	88.0	87.9	85.3
Kuvasto	71.0	71.0	71.0	97.5
Teosto	88.1	89.3	89.6	82.7
Tuotos	82.7	87.3	76.1	45.7

Sources: Gramex, Kopioisto, Kuvasto, Teosto and Tuotos

## 5. Cross-Border Flow of Copyright Remunerations

This section presents the foreign trade of certain goods and services related to the copyright sector as well as the trade in rights which are sources of flows of copyright remunerations, royalties and license fees. The figures presented are based on data gathered from Finnish Customs and International Trade Statistics and published by Statistics Finland. Imports and exports are measured on the basis of products rather than industries. Due to the fact that manufactured articles progress from being raw materials to being a final product they go through an entire production chain in which the role of distribution channels, such as transport, wholesale and retailing, is unknown and irretrievable when registering final products.<sup>11</sup> Therefore, the trade balance cannot be broken down into industry categories with the same level of accuracy as financial statement statistics and thus presenting the results in accordance with the WIPO template is rather problematic. Moreover, while trade statistics for more traditional copyrighted goods, such as books and newspapers, are readily available, data on related services and royalty flows include major shortcomings. Industry associations and company information can be used to alleviate these problems. However, surveys produced on a regular basis are required in order to produce reliable results at the desired level.

For those categories of available copyright materials that concern core copyright industries, exports amounted to €7,085 million in 2008, which represents 10.8 percent of Finland's total exports. The respective value for imports was €4,754 million, which amounts to 7.6 percent of total imports. This produced a trade surplus of €2,331 million. In 2005, the trade deficit of the core copyright industries was €505 million. The most significant categories of copyrighted material in terms of total export value were computer services<sup>12</sup>, the royalties and licence fees of all industries, press and literature as well as advertising and related services. The same categories were also important in terms of imports. In addition, the import value of advertising and related services was much greater than their export value in 2008. In terms of computer services and press and literature, Finnish exports exceeded the value of respective imports in 2008.

**Table 13: Core copyright industry related exports 2005 – 2008**

	2005		2006		2007		2008	
	M€	%	M€	%	M€	%	M€	%
Press and literature	286	10.9 %	291	11.9 %	296	10.9 %	262	3.7 %
Recorded media*	8	0.3 %	8	0.3 %	7	0.3 %	6	0.1 %
Visual and graphic art works	4	0.2 %	24	1.0 %	4	0.1 %	3	0.0 %
Computer services	1,194	45.6 %	1,136	46.3 %	1,335	49.3 %	5,650	79.7 %
Information services	19	0.7 %	41	1.7 %	3	0.1 %	7	0.1 %
Advertising and related services	130	5.0 %	83	3.4 %	117	4.3 %	116	1.6 %
Audiovisual and related services	6	0.2 %	3	0.1 %	9	0.3 %	3	0.0 %
Other personal, cultural and recreational services	4	0.2 %	16	0.7 %	5	0.2 %	31	0.4 %
Royalties and licence fees	969	37.0 %	850	34.7 %	930	34.4 %	1,007	14.2 %
Total	2,620	100%	2,452	100%	2,706	100%	7,085	100%

Source: Finnish Board of Customs Foreign Trade Statistics

\* Recorded media includes CPA (Statistical Classification of Products by Activity in the European Community) 2002 D DE 221411 Gramophone records, CDs and DVDs

<sup>11</sup> Leenheer, Jorna, Bremer, Simon & Theeuwes, Jules (2008) The Economic Contribution of Copyright Industries to the Netherlands, SEO Economic Research., SEO Report no. 2008-60.A, p. 6.

<sup>12</sup> The foreign trade in services statistics are based on the survey on foreign trade in services carried out by Statistics Finland. In 2008, the growth in foreign trade came especially from increased financial transactions of international groups and concentration of group activities into Finland from abroad. In exports the changes are visible especially in the exports of computer services.

**Table 14: Core copyright industry related imports 2005 – 2008**

	2005		2006		2007		2008	
	M€	%	M€	%	M€	%	M€	%
Press and literature	194	6.2 %	192	5.9 %	200	5.3 %	194	4.1 %
Recorded media*	30	1.0 %	30	0.9 %	39	1.0 %	30	0.6 %
Visual and graphic art works	5	0.2 %	16	0.5 %	10	0.3 %	2	0.0 %
Computer services	904	28.9 %	879	27.0 %	1,077	28.4 %	1,293	27.2 %
Information services	25	0.8 %	12	0.4 %	17	0.4 %	18	0.4 %
Advertising and related services	1,046	33.5 %	1,069	32.9 %	1,359	35.9 %	1,804	37.9 %
Audiovisual and related services	10	0.3 %	8	0.2 %	21	0.6 %	14	0.3 %
Other personal, cultural and recreational services	9	0.3 %	14	0.4 %	12	0.3 %	19	0.4 %
Royalties and licence fees	902	28.9 %	1,031	31.7 %	1,051	27.8 %	1,380	29.0 %
<b>Total</b>	<b>3,125</b>	<b>100%</b>	<b>3,251</b>	<b>100%</b>	<b>3,786</b>	<b>100%</b>	<b>4,754</b>	<b>100%</b>

Source: Finnish Board of Customs Foreign Trade Statistics

\* Recorded media includes CPA (Statistical Classification of Products by Activity in the European Community) 2002 D DE 221411 Gramophone records, CDs and DVDs

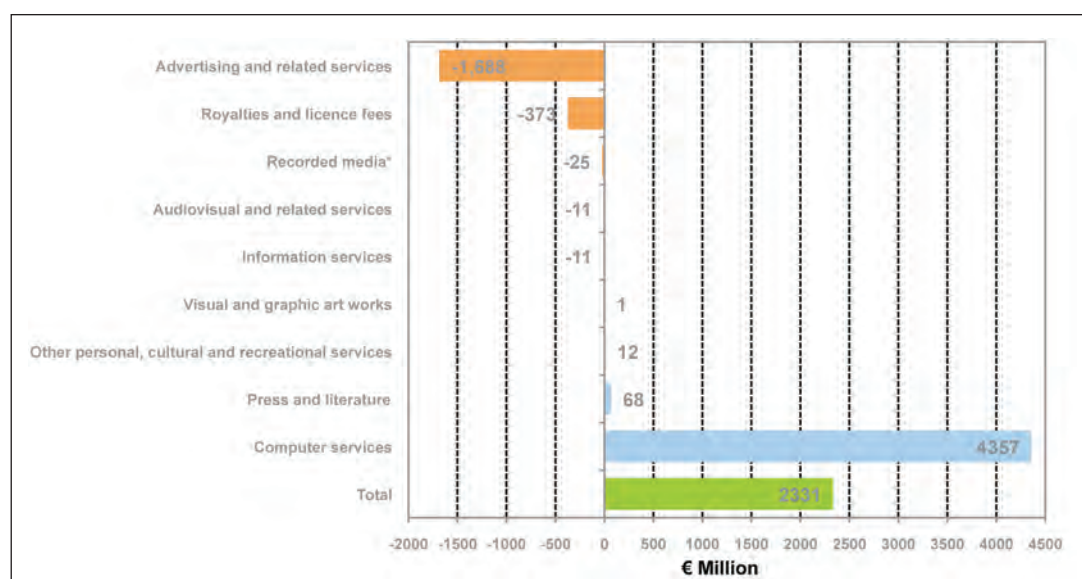
**Table 15: Core copyright industry related trade balance in 2008**

	Export	Import	Trade balance
Press and literature	262	194	68
Recorded media*	6	30	-25
Visual and graphic art works	3	2	1
Computer services	5,650	1,293	4,357
Information services	7	18	-11
Advertising and related services	116	1,804	-1,688
Audiovisual and related services	3	14	-11
Other personal, cultural and recreational services	31	19	12
Royalties and licence fees	1,007	1,380	-373
<b>Total</b>	<b>7,085</b>	<b>4,754</b>	<b>2,331</b>

Source: Finnish Board of Customs Foreign Trade Statistics

\* Recorded media includes CPA (Statistical Classification of Products by Activity in the European Community) 2002 D DE 221411 Gramophone records, CDs and DVDs

**Figure 9: Core copyright industry related trade balance in 2008**



The trade structure of interdependent copyright industries shows that Finland produces a trade deficit in all categories except paper, which produces a vast surplus. Of the other products of the interdependent industries, only television and radio receivers and recorders, and computers constitute any significant exports. In both of these categories the imports are considerably higher than exports; in television and radio trade the imports are almost twice the exports and in computers almost threefold. The international significance of Finland in interdependent copyright industries is clearly centred on paper production.

**Table 16: Interdependent copyright industry related trade balance in 2008**

	Export	Import	Trade balance
TV sets, radios, VCRs, CD and DVD players, etc.	271	778	-507
Computers and equipment	297	852	-555
Musical instruments	1	23	-21
Photographic and cinematographic instruments	77	214	-137
Photocopiers	n/a	n/a	n/a
Blank recording material	102	207	-105
Paper	2,212	83	2,129
Total	2,961	2,156	804

Source: Finnish Board of Customs Foreign Trade Statistics

## 6. International Comparison

In essence, the WIPO methodology offers a means to standardise national studies by examining the contribution of copyright-based industries and thus improving cross-national comparability. However, as the WIPO Guide was published in 2003, only a few studies have been published that both apply the WIPO methodology and include comparable results on the years included in this study.

Furthermore, practices in using the WIPO Guide are still evolving. Differences prevail in the level of detail of the reports and the methods used, data sources are not always fully transparent either. Certain differences are due, for example, to variations in the availability of statistics or industry categorisations. Moreover, practices vary in terms of dealing with missing data, using copyright factors and reporting results on foreign trade, for instance. Thus, although cross-national comparisons are the least sensitive to such issues at an aggregate level, the results should nevertheless be interpreted with caution.

Table 17 compares the economic contributions of copyright-based industries in countries that have conducted studies in accordance with the WIPO Guide.

**Table 17: Economic contribution of the copyright-based industries using WIPO methodology**

	Reference year	Value added as % of GDP	Employment as % of total employment
Australia	2007	10.30	8.00
Bulgaria	2005	2.81	4.30
Canada	2004	4.50	5.55
Colombia	2005	3.30	5.80
Croatia	2004	4.27	4.64
Finland	2008	4.73	5.12
Hungary	2002	6.66	7.10
Jamaica	2005	4.81	3.03
Latvia	2000	4.55	5.59
Lebanon	2005	4.75	4.49
Mexico	2003	4.77	11.01
The Netherlands	2005	5.90	8.80
Philippines	1999	4.82	11.10
Russia	2004	6.06	7.30
Romania	2005	5.55	4.19
Singapore	2001	5.67	5.80
Ukraine	2005	2.85	1.90
USA	2007	11.05	8.51

Source: World Intellectual Property Organization [http://www.wipo.int/export/sites/www/ip-development/en/creative\\_industry/pdf/eco\\_table.pdf](http://www.wipo.int/export/sites/www/ip-development/en/creative_industry/pdf/eco_table.pdf)

\* The table above illustrates that a number of studies have been carried out in countries that have only a limited number of official statistics available and make use of their own surveys and proxies. One must take into account these limitations while making international comparisons and conclusions.

\* One must also take into account the fact that data for different studies was collected for different time period

Figures 10, 11, 12 and 13 and tables 18 and 19 help to illustrate the position of the Finnish copyright-based industries. On average the copyright-based industries comprise 5.4 percent of the GDP of a country. However, in Finland the copyright-based industries comprise approximately 4.7 percent of GDP; therefore Finland is somewhat below average and takes twelfth position in the group of 18 countries. Nevertheless, in terms of the contribution of the core copyright industries, Finland with 3.7 percent contribution ranks fifth.

Figure 10: Value added of the total copyright-based industries as percentage of GDP per country

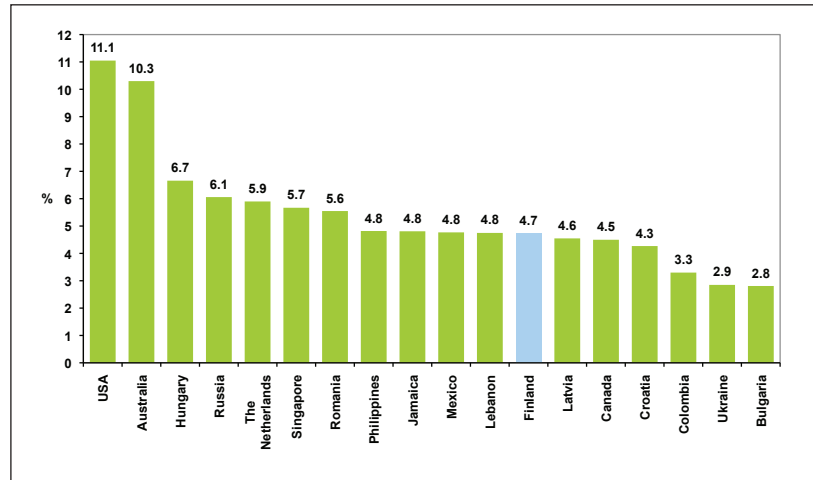
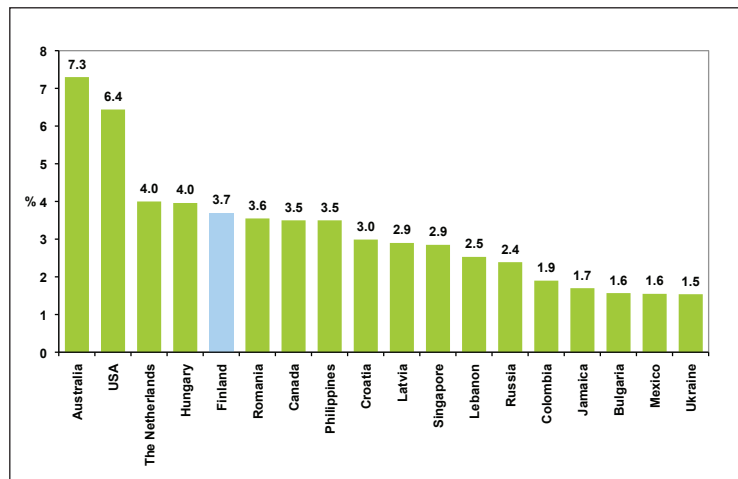


Figure 11: Value added of the core copyright industries as percentage of GDP per country

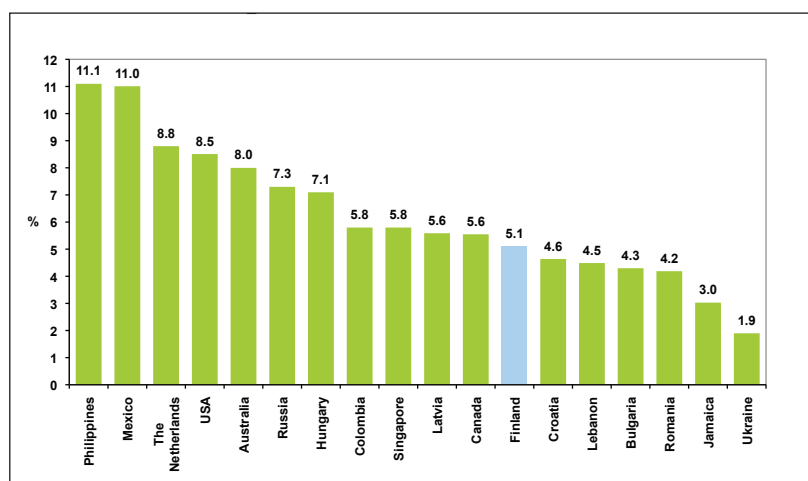


**Table 18: Value added of the copyright-based industries by sub-categories as a percentage of GDP per country**

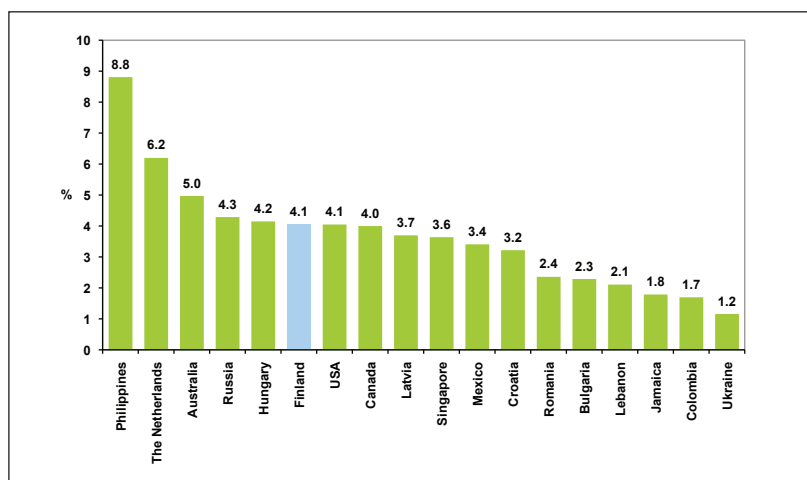
	Reference year	Core	Interdependent	Partial	Non-dedicated	Total
Australia	2007	7.30	2.00	0.40	0.70	10.30
Bulgaria	2005	1.57	0.62	0.09	0.52	2.81
Canada	2004	3.50	0.81	0.08	0.31	4.70
Colombia	2005	1.90	0.80	0.30	0.40	3.30
Croatia	2004	2.99	0.88	0.32	0.07	4.27
<b>Finland</b>	<b>2008</b>	<b>3.70</b>	<b>0.47</b>	<b>0.20</b>	<b>0.36</b>	<b>4.73</b>
Hungary	2002	3.96	1.24	0.45	1.00	6.66
Jamaica	2005	1.70	0.74	0.47	1.90	4.81
Latvia	2000	2.90	1.10	0.27	0.28	4.55
Lebanon	2005	2.53	0.71	0.62	0.89	4.75
Mexico	2003	1.55	1.69	0.85	0.68	4.77
Netherlands	2005	4.00	0.40	0.90	0.60	5.90
Philippines	1999	3.50	0.96	0.04	0.29	4.82
Russia	2004	2.39	0.76	0.27	2.64	6.06
Romania	2005	3.55	1.08	0.53	0.39	5.55
Singapore	2001	2.85	1.76	0.09	0.97	5.67
Ukraine	2005	1.54	0.68	0.10	0.54	2.85
USA	2007	6.44	n/a	n/a	n/a	11.05

In terms of employment, the copyright-based industries contributed, on average, 6.2 percent to the total amount of people employed in a country. In Finland the copyright-based industries contributed, on average, a total of 5.1 percent to Finland’s employment figure, reaching nearly the average in the group of 18 countries. When it comes to the contribution of the core copyright industries, Finland’s contribution with 4.1 percent clearly exceeds the average and ranks sixth amongst the 18 countries. This is a slightly higher proportion than for example in the United States.

**Figure 12: Employment in the copyright-based industries as a percentage of the total employment per country**



**Figure 13: Employment in the core copyright industries as a percentage of the total employment per country**



**Table 19: Employment in the copyright-based industries as a percentage of the total employment per country**

	Reference year	Core	Interdependent	Partial	Non-dedicated	Total
Australia	2007	4.97	1.81	0.57	0.65	8.00
Bulgaria	2005	2.29	0.73	0.27	1.00	4.30
Canada	2004	4.00	0.91	0.16	0.33	5.40
Colombia	2005	1.70	0.70	1.90	1.50	5.80
Croatia	2004	3.22	0.93	0.41	0.08	4.64
<b>Finland</b>	<b>2008</b>	<b>4.06</b>	<b>0.43</b>	<b>0.25</b>	<b>0.38</b>	<b>5.12</b>
Hungary	2002	4.15	1.25	0.61	1.07	7.10
Jamaica	2005	1.79	0.31	0.23	0.68	3.03
Latvia	2000	3.70	0.70	0.44	0.75	5.59
Lebanon	2005	2.11	0.73	0.70	0.95	4.49
Mexico	2003	3.41	3.65	2.53	1.41	11.01
Netherlands	2005	6.20	0.60	1.10	1.00	8.80
Philippines	1999	8.81	1.40	0.20	0.60	11.10
Russia	2004	4.29	0.75	0.56	1.69	7.30
Romania	2005	2.36	0.58	0.82	0.43	4.19
Singapore	2001	3.64	1.24	0.18	0.74	5.80
Ukraine	2005	1.16	0.46	0.08	0.20	1.90
USA	2007	4.05	n/a	n/a	n/a	8.51



## 7. Conclusions

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This survey covered the economic contribution of copyright-based industries during the years 2005, 2006, 2007 and 2008. The relative contribution of all copyright-based industries remained rather steady under examination during the years; while in 2005 this contribution was of 4.62 percent, the respective figure for 2008 was of 4.73 percent. The combined value added for the copyright-based industries in 2005 was €7.27 billion and €8.72 billion in 2008. The contribution of the core copyright industries increased from 3.61 percent in 2005 to 3.70 percent in 2008. The share of partial and non-dedicated support industries increased slightly from 2005 to 2008 while the contribution of the interdependent industries fell from 0.54 percent in 2005 to 0.47 percent in 2008. One reason for the decline is the decrease in the value of paper production. The paper industry is one of the major industries in the Finnish economy and therefore, although only a portion of the paper industry's value added is calculated as being copyright-based, a decline in pulp and paper production heavily affects the numbers of the interdependent copyright industries.

The copyright-based industries employed a total of 116 811 people in 2005 and 129 496 people in 2008. In 2005 this represented 4.87 percent of the total employed workforce while the respective number for 2008 was of 5.12 percent. Both the total number of employees in the copyright-based industries and the relative proportion of this workforce slightly increased from 2005 to 2008. This increase is almost totally due to the growth of the workforce in core copyright industries, especially in the subcategories of software and databases, advertising and film and video, which have increased their number of employees.

When comparing this to previous studies made in Finland one has to be cautious. The report published in 2008, covering the years 2000, 2003, 2004 and 2005 did not fully apply the methodology of the WIPO Guide and therefore the results are not fully comparable. However, the differences between the used methodologies are not great. That is particularly apparent when it comes to the core copyright industries, in which the differences are insignificant. The economic contribution of core copyright industries was 3.28 percent of GDP in the year 2000 and had reached 3.70 percent by 2008. One can conclude that the economic contribution of the core copyright industries has shown a moderate but clear growth over the past eight years. During the same period the copyright-based industries' share in relation to total employment has also increased, although slightly less than the value added share has. Specifically in the year 2000, the copyright-based industries represented 3.96 percent of the total employed workforce while the respective share in 2008 was of 4.06 percent.

This report applied the WIPO Guide on Surveying the Economic Contribution of the Copyright-Based Industries. The high-grade statistical system of Finland enables the report to capture accurately copyright-based activities according to the WIPO Guide. However, the WIPO Guide requires assessment and judgement in certain aspects, for example when measuring the copyright-factors of independent and partial copyright industries. In this report the researchers were cautious and used moderate assumptions when calculating the copyright-factors. Therefore one can say that the economic contribution figures of this research paper are more likely to underestimate than overestimate the importance of the copyright industries' contribution to the economy.

The WIPO Guide on Surveying the Economic Contribution of the Copyright-Based Industries was published in 2003 and the experience of its implementation reveals a level of variations. There are obviously variations in the availability of statistics or industry categorisations but practices also vary in terms of dealing with missing data, using copyright factors and reporting results on foreign trade. In particular, the use of copyright factors is an issue that requires caution when making international comparisons. Some of reports do not reveal what copyright factors have been used and what weight is given to interdependent, partial or non-dedicated support industries.

The international comparisons made in Chapter 5 indicate that Finland ranks high in terms of the contribution of its core copyright industries rather than the overall contribution of all its copyright-based industries. This means that the non-core copyright industries contribute less in Finland than in many other countries. Nevertheless, it should be kept in mind that certain national reports are not entirely transparent on the calculation of the contribution of the non-core copyright industries and therefore the comparison has to be interpreted with caution. Further alignment of the methodology implementation would be desirable. In

this regard it would be helpful if WIPO could introduce standard copyright factors or take the differences of various economies into consideration when developing the WIPO methodology. Meetings of researchers and an organised researchers' network would be beneficial for the further development of the research methodology as well as for the standardisation of the implementation of the methodology. WIPO's expertise and resources are valuable in the coordination of these further development activities.

In 2009 a revised statistical standard industrial classification, TOL 2008, was introduced in Finland. The new classification has several differences compared to the old one. One of the important changes is that publishing activities have been moved from manufacturing to a new section called information and communication. The content of the classification has changed most of those services into which nearly 100 categories have been added for the most detailed level. For surveying the economic contribution of the copyright industries the new classification changes will probably mean the availability of more detailed statistical data. However, it also means that increased consideration and analysis is needed when making comparisons with previous surveys.

TOL 2008 is based on the European Union's classification of economic activities, NACE Rev. 2. The revised standard industrial classification will be introduced simultaneously in all EU countries. The standard industrial classification of the United Nations will also be harmoniously revised at the same time. However, the introduction timetable is less synchronous outside the European Union. When the statistical classifications become internationally more uniform, more coherent international survey methods will obviously be facilitated and the making of international comparisons will become easier.

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## Appendices

### Appendix 1 Copyright-based industries and related activities with corresponding industry classification codes and the used copyright factors

All the subcategories of the core copyright industries are included in the calculations of the economic contribution of copyright. Thus their copyright factor is 100%.

CORE COPYRIGHT INDUSTRIES			
CATEGORY	ACTIVITIES	CORRESPONDING INDUSTRIES IN FINNISH TOL 2002 CLASSIFICATION	
<b>Press and Literature</b>	Authors, writers, translators	Not available for annual bases	
	Newspapers	22120 Publishing of newspapers	
	News and feature agencies, etc.	92400 News agencies	
	Magazines and periodicals	22130 Publishing of magazines and periodicals	
	Books, maps	22110 Publishing of books	
	Other publishing (cards, directories, etc.)	22210 Printing of newspapers	
	Pre-press, printing, and post press of published materials		22220 Other printing
			22230 Bookbinding
			22240 Pre-press activities
			22250 Other activities related to printing
	Wholesale and retail of press and literature		51474 Wholesale of books
			52472 Retail of books
			52473 Retail sale of newspapers and periodicals
			52502 Retail sale in antiquariums
			52611 Retail of books by mail and internet, this category includes also music and film sold through these channels
Libraries	Cultural statistics, public and scientific libraries		

CATEGORY	ACTIVITIES	CORRESPONDING INDUSTRIES IN FINNISH TOL 2002 CLASSIFICATION
<b>Music, Theatrical Productions, Opera</b>	Composers, lyricists, arrangers, choreographers, directors, performers, etc.	Not available for annual bases
	Printing and publishing of music	22140 Publishing of recorded music
	Reproduction of recorded music	22310 Reproduction of recorded music
	Wholesale and retail of recorded music	51432 Wholesale of entertainment electronics. The values are derived from Finnish sound recording producers' estimations
	Artistic and literary creation and interpretation	92311 Artistic and literary creation and interpretation. Includes contract or commission based or freelance activities of artists and firms that are also working on areas other than music. Not possible to attribute to all relevant fields of activity on an annual basis
	Performances and allied agencies (booking agencies, ticket agencies, etc)	92312 Stage and concert activities
92320 Support activities for culture and entertainment		
<b>Film and Video</b>	Writers, directors, actors, etc.	Not available for annual bases
	Motion picture and video production	9211 Motion picture and video production
		22321 Reproduction of recorded media
	Motion picture and video distribution	9212 Motion picture and video distribution
	Motion picture exhibition	9213 Motion picture and video projection
Video rentals and sales	71401 Renting of video films	
	The category supplemented by statistics on video and DVD sales and value added and employment calculated according to sample survey from Orbis database	
<b>Photography</b>	Photographic services, studios, etc.	74811 Photographic studios
<b>Visual and Graphic Arts</b>	Artists	Not available for annual bases
	Art galleries and other wholesale and retail	52484 Art galleries
	Graphic design	74871 Industrial design and planning. Graphic design only a part of this category. Estimate made according to occupation statistics problem is that graphic design activities take place in other industries too. E.g. prepress, information networks, advertising
<b>Radio and Television</b>	Radio and television activities	9220 Radio and television activities
	Transmission via cable and satellite networks	64203 Transmission via cable and satellite networks

CATEGORY	ACTIVITIES	CORRESPONDING INDUSTRIES IN FINNISH TOL 2002 CLASSIFICATION
<b>Software and Databases</b>	Programming, development, and design	7221 Software publishing
		72220 Other software consultancy and supply
	Wholesale and retail	51840 Wholesale of computers, computer peripheral equipment and software
		52492 Retail sale of computers
	Databases, processing and database publishing	72300 Data processing services
		7240 Database activities
<b>Advertising</b>	Agencies, buying services	74401 Advertising agencies
		74402 Direct and outdoor advertising
		74409 Other advertising services
<b>Copyright Collecting Societies</b>	Copyright Collecting Societies	91110 Business and Employers' associations, Annual statements of Copyright Collecting Societies

**INTERDEPENDENT COPYRIGHT INDUSTRIES**

CATEGORY	ACTIVITIES	CORRESPONDING INDUSTRIES IN FINNISH TOL 2002 CLASSIFICATION	Copyright factor	
			Finland	Netherlands
<b>TV sets, Radios, VCRs, CD Players, DVD Players, Cassette Players, Electronic Game Equipment, and Other Similar Equipment</b>		32300 Manufacture of TV and radio receivers and recording devices	35%	35%
		51432 Wholesale of entertainment electronics		
		52451 Retail sale of household appliances and entertainment electronics		
<b>Computers and Equipment</b>	Manufacture	30020 Manufacture of computers	35%	35%
	Wholesale and retail	51840 Wholesale of computers, computer peripheral equipment and software		
		52492 Retail sale of computers		
<b>Musical Instruments</b>	Manufacture	36300 Manufacture of musical instruments	20%	20%
	Wholesale and retail	51481 Wholesale of musical appliances		
		52452 Retail sale of musical instruments and appliances		
<b>Photographic and cinematographic instruments</b>	Manufacture	33400 Manufacture of optical and photographic appliances	30%	30%
	Wholesale and retail	51475 Wholesale of photographic appliances and supplies		
		52485 Retail sale of photographic appliances and supplies		
<b>Photocopiers</b>	Manufacture	30010 Manufacture of office machinery	30%	30%
	Wholesale and retail	51851 Wholesale of office machinery		
		52493 Retail sale of office machinery and communication appliances		
<b>Blank recording material</b>	Manufacture	24650 Manufacture of blank recording material	25%	25%
	Wholesale and retail	51432 Wholesale of entertainment electronics		
		52451 Retail sale of household appliances and entertainment electronics		
<b>Paper</b>	Manufacture	21120 Manufacture of paper and paperboard	25%	25%
	Wholesale and retail	51560 Wholesale of other intermediate products		
		52471 Wholesale of paper and office products		



PARTIAL COPYRIGHT INDUSTRIES				
Economic activity	ISIC rev. 3.1 code	Finnish TOL 2002 code	Copyright factor	
			Finland	The Netherlands
<b>Apparel textiles and footwear</b>	1810 Manufacture of wearing apparel	18 Manufacture of clothing and fur wear	2.7 %	2.7 %
	1721 Manufacture of made-up textile articles			2.7 %
	1920 Manufacture of footwear	1930 Manufacture of footwear	2.7 %	2.7 %
	5131 Wholesale of textiles, clothing and footwear	5142 Wholesale of clothing and footwear	2.7 %	2.7 %
	5232 Retail sale of textiles clothing footwear and leather goods	5241 Retail sale of textiles, 5242 Retail sale of clothing 5243 Retail sale of footwear	2.7 %	2.7 %
<b>Jewellery and coins</b>	3691 Manufacture of jewellery and related articles	362 Manufacture of goldsmith's products and coins	33.5 %	33.5 %
	5139 Wholesale of other household goods	51489 Wholesale of other household goods	5 %	5 %
	5239 Other retail sale in specialised stores	52445 Retail sale of household goods n.e.c.	2.7%	2.7 %
<b>Other crafts</b>	9199 Activities of other membership organisations n.e.c.	91339 Activities of other membership organisations n.e.c.	41 %	41 %
	5239 Other retail sale in specialised stores	52499 Retail sale in specialised stores n.e.c.	2.7%	2.7 %
<b>Furniture</b>	3610 Manufacture of furniture	361 Manufacture of furniture	6.7 %	6.7 %
	5139 Wholesale of other household goods	51489 Wholesale of other household goods	5 %	5 %
<b>Household goods, china and glass</b>	2610 Manufacture of glass and glass products	26130 Manufacture of hollow glass products	0.55 %	0.55 %
	173 Manufacture of knitted and crocheted fabrics and articles	172 Manufacture of fabrics , 173 Finishing of fabrics	0.55 %	0.55 %
	2029 Manufacture of other products of wood	20510 Manufacture of other products of wood	0.55 %	0.55 %
	2899 Manufacture of other fabricated metal products n.e.c.	28750 Manufacture of other fabricated metal products	0.55 %	0.55 %
	5139 Wholesale of other household goods	51489 Wholesale of other household goods	5 %	5 %
	5239 Retail sale of household appliances, articles and equipment	51441 Retail sale of household appliances, articles and equipment	2.7 %	2.7 %
<b>Wall coverings and carpets</b>	1722 Manufacture of carpets and rugs	17510 Manufacture of carpets	1.9 %	1.9 %
	2109 Manufacture of other articles of paper and paper board	21250 Manufacture of other articles of paper and paper board	1.9 %	1.9 %
	5239 Other retail sale in specialised stores	52279 Other retail sale in specialised stores	2.7 %	2.7 %

Economic activity	ISIC rev. 3.1 code	Finnish TOL 2002 code	Copyright factor	
			Finland	The Netherlands
<b>Toys and games</b>	3694 Manufacture of games and toys	36500 Manufacture of games and toys	46 %	46 %
	5139 Wholesale of other household goods	51489 Wholesale of other household goods	5 %	5 %
	5239 Other retail sale in specialised stores	52279 Other retail sale in specialised stores	2.7 %	2.7 %
<b>Architecture, engineering, surveying</b>	7421 Architectural and engineering activities and related technical consultancy	742 Architectural and engineering activities and related technical consultancy	9 %	9 %

NON-DEDICATED SUPPORT INDUSTRIES				
Economic activity	ISIC rev. 3.1 code	Finnish TOL 2002 code	Copyright factor	
			Finland	The Netherlands
<b>General wholesale and retailing</b>	513 Wholesale of household goods	5115 Venture of household goods	6 %	6 %
	515 Wholesale of machinery, equipment and supplies	5114 Venture of machinery and equipment		
	519 Other wholesale	5119 Venture activities		
	521 Non specialised retail trade in stores	52630 Non-specialised retail trade in stores		
	523 Other retail trade of new goods in specialised stores	52499 Retail trade n.e.c.		
	525 Retail trade not in stores	52630 Other retail trade not in stores		
<b>General transportation</b>	601 Transport via railways	601 Transport via railways	6 %	6 %
	602 Other land transport	603 Other land transport		
	61 Water transport	62 Water transport		
	62 Air transport	63 Air transport		
	6301 Cargo handling	63110 Cargo handling		
	6302 Storage and warehousing	63120 Storage and warehousing		
	6303 Other supporting transport activities	6321 Other supporting transport activities		
	6304 Activities of travel agencies and tour operators; tourist assistance activities n.e.c.	633 Activities of travel agencies and other tourist assistance activities n.e.c.		
	6309 Activities of other transport agencies	634 Activities of other transport agencies		
	6411 National post activities	6412 National post activities		
<b>Telephony and internet</b>	6420 Telecommunications	642 Telecommunications	6 %	6 %
	7240 Database activities and on-line distribution of electronic content	7241 Database and network services		

## ECONOMIC CONTRIBUTION OF COPYRIGHT-BASED INDUSTRIES IN FINLAND 2005 – 2008

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