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

FINNISH COPYRIGHT SOCIETY (C) Finnish Copyright Institute

Publications No 29 (2010)

ECONOMIC CONTRIBUTION 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, and 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.

FINNISH COPYRIGHT SOCIETY C Finnish Copyright Institute

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.

> © 2010 The Finnish Copyright Society and The Finnish Copyright Institute

> > Graphic design: Petteri Lehtinen

Printing Works: Libris, Helsinki 2010

ISSN 1237-5071 ISBN 978-952-9855-28-5 Publications No 29 (2010)

Table of contents

Executive summary 4

1. Introduction 6

2. The Copyright-based Industries and the Methodology of the Study 9

- 2.1. The Copyright-based Industries 9
- 2.2. Establishing of Copyright Factors 11
- 2.3. Collection of Data 15

3. The Economic Contribution of Copyright-based Industries in Finland 17

4. Collective Management Organisations 27

5. Cross-border Flow of Copyright Remunerations 30

6. International Comparison 34

7. Conclusions 40

References 43

Appendices 46

Executive summary

Copyrighted works have important social and cultural functions in contemporary societies. Works protected by copyright and industries that exploit copyrighted material 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 three-fold:

- 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 the 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 copy-right-based industries represented 4.73 percent of Finnish GDP in 2008 and amounted to € 8.72 billion.
- The combined number of employees in the copyrightbased industries amounted to 129 496 and represented 5.12 percent of the total employment in Finland.
- From the year 2000 to the year 2008 the economic contrbution 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 approx-

imately 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 and 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.

I. Introduction

During recent decades intellectual property has received increasing attention in post-industrial economies and 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 copyright¹ 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 rapid increase in the amount of digitized products and services, have boosted the industries and businesses relying on subject matter protected by copyright. Economists now broadly share the opinion that the industrialised economies have transformed into knowledgebased 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 material 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 a subject for 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.

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

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, 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 of 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, 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 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 material. 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 material acquires a value which enables it to be measured. It also enables copyright protected material to be traded and ensures it can be used in all areas of economic life (WIPO Guide 2003).

The creation process of copyright protected material only forms the basic element relevant for the copyright's economic contribution. The works need to be modified, packaged, reproduced and distributed² 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 material 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 material. 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.

 $^{^2}$ 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.

Figure 1 Layers of economic activities related to the production, packaging and distribution of material 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 copyrightbased industries into four main groups, namely the core copyright industries, the interdependent copyright industries, the partial copyright industries and the non-dedicated support industries.

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 software³.

Interdependent copyright industries are industries that are engaged in 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; compu-

³ Complete list of industries included to the four principal categories is in Appendix 1.

ters; 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, the 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 proxies⁴. 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 reasoning used in and data gained from three national studies in Singapore⁵, Hungary⁶ and the Netherlands⁷.

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 materials⁸ 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.

⁴ 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 13

⁵ To determine its copyright factors researchers in Singapore conducted a survey among 104 companies ⁶ 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.

⁷ 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

⁸ 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						
	Finland	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 %			

Table 1 Copyright factors of the core copyright industries

* Detailed table of the core copyright industries is shown in Appendix I

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.

	Copyright factors						
	Finland	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 %			

* Detailed table of the interdependent copyright industries is shown in Appendix 1

Partial copyright industries

Hungary's copyright factor per industry varied between 0.5 percent and 50 percent, and had an average of 8 percent. Singapore's copyright factor per industry varied between 0.4 percent and 42 percent, and 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, and had an average of 7 percent. As there are lot of social and economic similarities between Finland and the Netherlands the 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.

	Copyright factors						
	Finland	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 %	۱,9 %	1,7 %	2 %			
Toys and games	46 %	46 %	42 %	50 %			
Architecture, engineering, surveying	9 %	9 %	8,3 %	10 %			
Museums	50 %	50 %	Not included	50 %			

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

Non-dedicated support industries

The Hungarian study used a copyright factor of 5.7 percent for all nondedicated 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 factors for the non-dedicated support activities of the Dutch study were used in this study. An overview of the national copyright factors of the non-dedicated support industries can be found in Table 4.

	Copyright factors					
	Finland	Netherlands	Singapore	Hungary		
All non-dedicated support industries	6,0 %	6,0 %	6,4 %	5,7 %		

Table 4 Copyright factors of the non-dedicated support industries

* Detailed table of the copyright factors of the non-dedicated support industries of the Finnish study is shown in Appendix I

2.3. Collection of Data

The data was predominately collected from corporate annual statement 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 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 noncopyright 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, the 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 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, %





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

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

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



		2005		2006			
	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	n/a	3,63	6 069	6,8	
Interdependent	0,54	848	n/a	0,56	940	10,8	
Partial	0,17	271	n/a	0,18	308	13,7	
Non-dedicated	0,30	466	n/a	0,24	393	-15,7	
Total	4,62	7 265	n/a	4,61	7 710	6,1	

Table 5	Value	added o	f the	copyrigh	ıt-based	indus	tries in	Finland
				- F.J. O				

		2007		2008			
	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	3,64	6 546	7,9	3,70	6 815	4,1	
Interdependent	0,41	738	-21,5	0,47	875	18,6	
Partial	0,17	298	-3,2	0,20	372	24,8	
Non-dedicated	0,29	522	32,8	0,36	658	26,1	
Total	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 copyrightbased 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, %

Figure 6 Number of employees in the copyright-based industries



		2005		2006			
	Employees Total		Change	Employees	Total	Change	
	as % of total	number of	in total	as % of total	number of	in total	
	employment %	employees	employment %	employment %	employees	employment %	
Core	3,94	94 702	n/a	3,96	96 868	2,3	
Interdependent	0,43	10 443	n/a	0,42	10 352	-0,9	
Partial	0,22	5 278	n/a	0,24	5 887	11,5	
Non-dedicated	0,27	6 389	n/a	0,25	6 218	-2,7	
Total	4,86	116 811	n/a	4,87	119 325	2,2	

Table 6	Employees i	n the o	copyright-based	industries in	Finland

	2007			2008			
	Employees	Total	Change	Employees	Total	Change	
	as % of total	number of	in total	as % of total	number of	in total	
	employment %	employees	employment %	employment %	employees	employment %	
Core	4,03	100 312	3,6	4,06	102 672	2,4	
Interdependent	0,43	10 732	3,7	0,43	10 933	1,9	
Partial	0,22	5 340	-9,3	0,25	6 281	17,6	
Non-dedicated	0,25	6 206	-0,2	0,38	9 610	54,9	
Total	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.



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

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



	Turnover (€ million)	Value added (€ million)	% of GDP	Employees	% of employed labour force
Core copyright industries					
Press and Literature	4 956	99	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 3 8	0,26
Software and Databases	5 710	2 612	١,66	38 916	1,62
Advertising	I 448	367	0,23	6 435	0,27
Copyright Collecting Societies	78	8	0,01	180	0,01
Total core copyright industries	14 083	5 680	3,61	94 702	3,94
Interdependent copyright industries	;				
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	I	0,00	36	0,00
Paper	2 813	640	0,41	7 356	0,31
Total interdependent copyright industries	4 464	848	0,54	10 443	0,43
Partial copyright industries					
Apparel textiles and footwear	57	14	0,01	367	0,02
Jewelry 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	I	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
Total partial copyright industries	794	271	0,17	5 278	0,22
Non-dedicated support industries					
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	I 236	0,05
Total non-dedicated support industries	I 730	466	0,30	6 392	0,27

Table 7 Economic contribution of the copyrig	ht-based industries in Finland, 2005
--	--------------------------------------

	Turnover (€ million)	Value added (€ million)	% of GDP	Employees	% of employed labour force
Core copyright industries					
Press and Literature	5 077	2 037	1,22	36 065	I,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	6316	0,26
Software and Databases	6 430	2 906	1,74	40 910	١,67
Advertising	I 530	400	0,24	6 811	0,28
Copyright Collecting Societies	80	9	0,01	184	0,01
Total core copyright industries	15 068	6 069	3,63	96 868	3,96
Interdependent copyright industries	;				
TV sets, radios, VCRs, CD players, DVD players etc.	486	52	0,03	I 034	0,04
Computers and Equipment	981	149	0,09	I 984	0,08
Musical Instruments	16	4	0,00	80	0,00
Photographic and cinematographic instruments	66	Ш	0,01	147	0,01
Photocopiers	77	14	0,01	249	0,01
Blank recording material	П	I	0,00	35	0,00
Paper	3 222	710	0,43	6 823	0,28
Total interdependent copyright industries	4 859	940	0,56	10 352	0,42
Partial copyright industries					
Apparel textiles and footwear	75	20	0,01	479	0,02
Jewelry 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	I	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
Total partial copyright industries	882	308	0,18	5 887	0,24
Non-dedicated support industries					
General wholesale and retailing	697	- 111	0,07	I 575	0,06
General transportation	671	166	0,10	3 4	0,13
Telephony and internet	395	124	0,07	I 077	0,04
Total non-dedicated support industries	I 763	402	0,24	5 793	0,24

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

	Turnover (€ million)	Value added (€ million)	% of GDP	Employees	% of employed labour force
Core copyright industries					
Press and Literature	4 981	2 006	1,12	36 053	I,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	I 616	475	0,26	7 738	0,31
Copyright Collecting Societies	85	9	0,01	184	0,01
Total core copyright industries	15 973	6 546	3,64	100 312	4,03
Interdependent copyright industries	5				
TV sets, radios, VCRs, CD players, DVD players etc.	522	64	0,04	92	0,05
Computers and Equipment	23	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	П	I	0,00	35	0,00
Paper	3 366	477	0,27	6 706	0,27
Total interdependent copyright industries	5 291	738	0,41	10 732	0,43
Partial copyright industries					
Apparel textiles and footwear	81	21	0,01	512	0,02
Jewelry 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	I	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
Total partial copyright industries	935	298	0,17	5 340	0,22
Non-dedicated support industries					
General wholesale and retailing	798	127	0,07	I 553	0,06
General transportation	669	267	0,15	3 568	0,15
Telephony and internet	337	128	0,07	I 038	0,04
Total non-dedicated support industries	I 804	522	0,29	6 159	0,25

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

	Turnover (€ million)	Value added (€ million)	% of GDP	Employees	% of employed labour force
Core copyright industries					
Press and Literature	5 003	I 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	25	0,04
Visual and Graphic Arts	22	6	0,00	204	0,01
Radio and Television	I 076	471	0,26	6 433	0,25
Software and Databases	7 558	3 492	1,90	44 750	١,77
Advertising	I 662	484	0,26	8 128	0,32
Copyright Collecting Societies	-	9	0,00	166	0,01
Total core copyright industries	16 476	6 815	3,70	102 672	4,06
Interdependent copyright industries	5				
TV sets, radios, VCRs, CD players, DVD players etc.	507	63	0,03	69	0,05
Computers and Equipment	I 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	l I	0,00	35	0,00
Paper	3 288	616	0,33	6 957	0,27
Total interdependent copyright industries	5 226	875	0,47	10 933	0,43
Partial copyright industries					
Apparel textiles and footwear	83	23	0,01	511	0,02
Jewelry and coins	180	45	0,02	812	0,03
Other crafts	33	П	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	I	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
Total partial copyright industries	I 046	372	0,20	6 281	0,25
Non-dedicated support industries					
General wholesale and retailing	1 003	163	0,09	2 328	0,09
General transportation	I 030	367	0,20	6 283	0,25
Telephony and internet	323	128	0,07	999	0,04
Total non-dedicated support industries	2 356	658	0,36	9 610	0,38

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

4. Collective Management Organisations

The main function of collective management organisations (CMOs)9 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 calculations¹⁰.

⁹ Referred to in the WIPO Guide as copyright collective management societies or copyright collecting societies

¹⁰ Sanasto started to distribute collected royalties for the first time in March 2010 and therefore out of the scope of this study

	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

Table 11 Royalties collected and distributed by the collective management organisations in 2008 (\in 1 000) (*Source: the annual reports of the copyright collecting societies*)

* Gramex figures include also 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 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 – 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 collecting 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 Kopiosto. 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 (Sources: Gramex, Kopiosto, Kuvasto, Teosto and Tuotos)

	2005	2006	2007	2008
Gramex	109,1	110,9	101,7	82,6
Kopiosto	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

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 products¹¹. 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 material that concern core copyright industries, exports amounted to \in 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 \in 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 services¹², the royalties and licence fees of all industries, press and literature as well as advertising and related services. The same categories were also

¹¹ 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 6.

¹² 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.

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.

	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	94	45,6 %	36	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	I,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 %	I 007	14,2 %
Total	2 620	100 %	2 452	100 %	2 706	100 %	7 085	100 %

Table 13 Core copyright industry related exports 2005 – 2008

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

	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 %	I 293	27,2 %
Information services	25	0,8 %	12	0,4 %	17	0,4 %	18	0,4 %
Advertising and related services	I 046	33,5 %	1 069	32,9 %	1 359	35,9 %	I 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 %	03	31,7 %	1 051	27,8 %	I 380	29,0 %
Total	3 125	100 %	3 251	100 %	3 786	100 %	4 754	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

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

Table 15 Core copyright industry related trade balance in 2008

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 double 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	Table 16 Interdependen	t copyright industry rel	lated 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	I	23	-21
Photographic and cinematographic intruments	77	214	-137
Photo-copiers	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 and data sources are not always fully transparent. 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.

	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
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

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

Source: World Intellectual Property Organization 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 from 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. However, 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


	Reference year	Core	Inter- dependent	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
Finland	2008	3,70	0,47	0,20	0,36	4,73
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

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

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 copyrightbased 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 with 4.1 percent contribution clearly exceeds the average and ranks sixth among the 18 countries. This is 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



	Reference year	Core	Inter- dependent	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
Finland	2008	4,06	0,43	0,25	0,38	5,12
Hungary	2002	4,15	1,25	0,61	1,07	7,10
Jamaica	2005	١,79	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

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

7. Conclusions

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 during the years under examination; while in 2005 this contribution was 4.62 percent, the respective figure for 2008 was 4.73 percent. The combined value added for the copyright-based industries in 2005 was € 7.27 billion and $\in 8.72$ 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 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 does 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 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. Researchers meetings 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 in those services into which nearly 100 categories have been added at 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.

References

Guide on Surveying the Economic Contribution of the Copyright-based Industries (2003) World Intellectual Property Organization, Geneva.

Francisco, Emma C., de Dios, Loreli C., Barrios, Erniel B. & Tijam, Albert P. (2007) The Economic Contribution of Copyright-Based Industries in the Philippines. In: *National Studies on Assessing the Economic Contribution of the Copyright-based Industries*, pp. 3-92. World Intellectual Property Organization, Creative Industries Series No. 2, Geneva.

James, Vanus (2007) The Economic Contribution of Copyright-Based Industries in Jamaica. In: *National Studies on Assessing the Economic Contribution of the Copyright-based Industries*, pp. 215-344. World Intellectual Property Organization, Creative Industries Series No. 2, Geneva.

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

Leo, Kah Mun, Chow, Kit Boey, Lee, Kee Beng, Ong, Chin Huat & Loy, Wee Loon (2006) The Economic Contribution of Copyright-Based Industries in Singapore. In: *National Studies on Assessing the Economic Contribution of the Copyrightbased Industries*, pp. 5-106. World Intellectual Property Organization, Creative Industries Series No. 1, Geneva.

Marquez-Mees, Victoria, Ruiz Funes, Mariano & Yaber, Berenice (2006) The Economic Contribution of Copyright-Based Industries in Jamaica. In: *National Studies on Assessing the Economic Contribution of the Copyright-based Industries*, pp. 93-214. World Intellectual Property Organization, Creative Industries Series No. 2, Geneva.

Melki, Robert (2007) The Economic Contribution of Copyright-Based Industries in Lebanon. In: *National Studies on Assessing the Economic Contribution of the Copyright-based Industries*, pp. 491-550. World Intellectual Property Organization, Creative Industries Series No. 2, Geneva. *National Studies on Assessing the Economic Contribution of the Copyright-based Industries* (2006) World Intellectual Property Organization, Creative Industries Series No. 1, Geneva.

National Studies on Assessing the Economic Contribution of the Copyright-based Industries (2008) World Intellectual Property Organization, Creative Industries Series No. 2, Geneva.

Penyigey, Krisztina & Munkácsi, Péter (2006) Economic Contribution of Copyright-Based Industries in Hungary. In: *National Studies on Assessing the Economic Contribution of the Copyright-based Industries*, pp. 283-387. World Intellectual Property Organization, Creative Industries Series No. 1, Geneva.

Picard, Robert G. & Toivonen, Timo E. (2004) *Issues in Assessment of the Economic Impact of Copyright*. Review of Economic Research on Copyright, 1(1), pp. 27-40

Picard, Robert G. & Toivonen, Timo E. (2005) *The Economic Contributions of Copyright-based Industries in Latvia* 2000, Ministry of Culture of the Republic of Latvia, Riga.

Picard, Robert G., Toivonen, Timo E. & Grönlund, Mikko (2003) *The Contribution of Copyright and Related Rights to the European Economy*. European Commission, Directorate General – Internal Market. http://ec.europa.eu/internal_market/publications/docs/report-copyright-contribution_en.pdf.

Sinervo, Petteri & Picard, Robert G. (2000) *Economic Importance of Copyright Industries in Finland, Finnish Copyright Industries in 1997.* The Finnish Copyright Society and The Finnish Copyright Institute, Helsinki.

Siwek, Stephen E. (2006) *Copyright Industries in the U.S. Economy*. International Intellectual Property Alliance, http://www.iipa.com/pdf/2004_SIWEK_FULL.pdf.

The Economic Contribution of Copyright Industries to the Canadian Economy (2004) Walls Communications Inc., Canadian Heritage, http://www.canadianheritage.gc.ca/progs/ac-ca/progs/pda-cpb/pubs/ economiccontribution/economic_contr_e.pdf. The Economic Contribution of Copyright-Based Industries in Bulgaria. In: *National Studies on Assessing the Economic Contribution of the Copyright-based Industries*, pp. 345-490. World Intellectual Property Organization, Creative Industries Series No. 2, Geneva.

Towse, Ruth. (2000) *Cultural Economics, Copyright and the cultural industry.* In: proceedings of the conference "The Long Run" at Erasmus University, Rotterdam, February 2000, p. 113.

Appendices

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

CATEGORY	ACTIVITIES	CORRESPONDING INDUSTRIES IN		
CATEGORI		FINNISH TOL 2002 CLASSIFICATION		
Press and Literature	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,	22220 Other printing		
	and post press of published materials	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		
Music, Theatrical	Composers, lyricists, arrangers, choreographers,	Not available for annual bases		
Productions, Opera	directors, performers, etc.			
,	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. 1		
		values are derived from Finnish sound recording		
		producers' estimations		
	Artistic and literary creation and interpretation	92311 Artistic and literary creation and inter-		
	, .	pretation. Includes contract or commission base		
		or freelance activities of artists and firms that		
		are also working on areas other than music.		
		Not possible to attribute to all relevant fields o		
		activity on an annual basis		
	Performances and allied agencies	92312 Stage and concert activities		
	(booking agencies, ticket agencies, etc)	92320 Support activities for culture and		
	(, , , , , , , , , , , , , , , , , , ,	entertainment		

CORE COPYRIGHT INDUSTRIES				
CATEGORY	ACTIVITIES	CORRESPONDING INDUSTRIES IN		
		FINNISH TOL 2002 CLASSIFICATION		
Film and Video	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		
Photography	Photographic services, studios, etc.	74811 Photographic studios		
Visual and	Artists	Not available for annual bases		
Graphic Arts	Art galleries and other wholesale and retail	52484 Art galleries		
		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		
		industies too. E.g. prepress, information networks,		
	Graphic design	advertising		
Radio and Television	Radio and television activities	9220 Radio and television activities		
	Transmission via cable and satellite networks	64203 Transmission via cable and satellite networks		
Software and Databases	Programming, development, and design	7221 Software publishing		
		72220 Other software consultancy and supply		
	Wholesale and retail	51840 Wholesale of computers, comuputer		
		peripheral equipment and software		
		52492 Retail sale of computers		
	Databases, processing and database publishing	72300 Data processing services		
		7240 Database activities		
Advertising	Agencies, buying services	74401 Advertising agencies		
		74402 Direct and outdoor advertising		
		74409 Other advertising services		
Copyright Collecting	Copyright Collecting Societies	91110 Business and Employers' associations,		
Societies		Annual statements of Copyright Collecting Societies		

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%.

INTERDEPENDENT COPYRIGHT INDUSTRIES			Copyright factor	
CATEGORY	ACTIVITIES	CORRESPONDING INDUSTRIES IN FINNISH TOL 2002 CLASSIFICATION	Finland	Netherland
TV sets, Radios,	Manufacture	32300 Manufacture of TV and radio receivers	35%	35%
VCRs, CD Players,		and recording devices		
DVD Players,	Wholesale and retail	51432 Wholesale of entertainment electronics		
Cassette Players,		52451 Retail sale of household appliances and		
Electronic Game		entertainment electronics		
Equipment,				
and Other Similar				
Equipment				
Computers and	Manufacture	30020 Manufacture of computers	35%	35%
Equipment	Wholesale and retail	51840 Wholesale of computers, comuputer		
		peripheral equipment and software		
		52492 Retail sale of computers		
Musical Instruments	Manufacture	36300 Manufacture of musical instruments	20%	20%
	Wholesale and retail	51481 Wholesale of musical appliances		
		52452 Retail sale of musical instruments		
		and appliances		
Photographic and	Manufacture	33400 Manufacture of optical and photographic	30%	30%
cinematographic		appliances		
instruments	Wholesale and retail	51475 Wholesale of photographic appliances and		
		supplies		
		52485 Retail sale of photographic appliances		
		and supplies		
Photocopiers	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		
Blank recording	Manufacture	24650 Manufacture of blank recording material	25%	25%
material	Wholesale and retail	51432 Wholesale of entertainment electronics		
		52451 Retail sale of household appliances and		
		entertainment electronics		
Paper	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		

PARTI	AL COPYRIGHT INI	Copyright factor		
Economic activity	ISIC rev. 3.1 code	Finnish TOL 2002 code	Finland	Netherlands
Apparel textiles	1810 Manufacture of wearing	18 Manufacture of clothing and	2,7%	2,7%
and footwear	apparel	furware		
	1721 Manufacture of made-up			2,7%
	textile articles			
	1920 Manufacture of footwear	1930 Manufacture of footwear	2,7%	2,7%
	5131 Wholesale of textiles,	5142 Wholesale of clothing and	2,7%	2,7%
	clothing and footwear	footwear		
	5232 Retail sale of textiles clothing	5241 Retail sale of textiles	2,7%	2,7%
	footwear and leather goods	5242 Retail sale of clothing		
		5243 Retail sale of footwear		
Jewelry and coins	3691 Manufacture of jewelry and	362 Manufacture of goldsmith's	33,5%	33,5%
	related articles	products and coins		
	5139 Wholesale of other household	51489 Wholesale of other house-	5%	5%
	goods	hold goods		
	5239 Other retail sale in special-	52445 Retail sale of household	2,7%	2,7%
	ised stores	goods n.e.c.	416/	444
Other crafts	9199 Activities of other	9199 Activities of other	41%	41%
	membership organisations n.e.c.	membership organisations n.e.c.	2 70/	2 70/
	5239 Other retail sale in	5239 Other retail sale in	2,7%	2,7%
F 14	specialised stores	specialised stores	4 70/	4 70/
Furniture	3610 Manufacture of furniture	361 Manufacture of furniture	6,7% 5%	6,7% 5%
	5139 Wholesale of other	51489 Wholesale of other	370	570
Heweeheld seeds	household goods	household goods	0,55%	0,55%
Household goods, china and glass	2610 Manufacture of glass and glass products	26130 Manufacture of hollow glass products	0,3370	0,5570
ciina anu giass	173 Manufacture of knitted and	172 Manufacture of fabrics	0,55%	0,55%
	crocheted fabrics and articles	172 Finishing of fabrics	0,3370	0,3370
	2029 Manufacture of other	20510 Manufacture of other	0,55%	0,55%
	products of wood	products of wood	0,0070	0,3570
	2899 Manufacture of other fabri-	28750 Manufacture of other fabri-	0,55%	0,55%
	cated metal products n.e.c.	cated metal products	0,007,0	0,0070
	5139 Wholesale of other household	51489 Wholesale of other house-	5%	5%
	goods	hold goods		
	5239 Retail sale of household	51441 Retail sale of household	2,7%	2,7%
	appliances, articles and equipment	appliances, articles and equipment	,	,
Wall coverings	1722 Manufacture of carpets and rugs	17510 Manufacture of carpets	1,9%	1,9%
and carpets	2109 Manufacture of other articles	21250 Manufacture of other	1,9%	1,9%
	of paper and paperboard	articles of paper and paperboard		
	5239 Other retail sale in	52279 Other retail sale in	2,7%	2,7%
	speciaslised stores	specialised stores		
Toys and games	3694 Manufacture of games and toys	17510 Manufacture of carpets	46%	46%
	5139 Wholesale of other household	21250 Manufacture of other	5%	5%
	goods	articles of paper and paperboard		
	5239 Other retail sale in specialised	52279 Other retail sale in	2,7%	2,7%
	stores	specialised stores		
Architecture,	7421 Architectural and engineering	742 Architectural and engineering	9%	9%
engineering,	activities and related technical	activities and related technical		
surveying	consultancy	consultancy		

Economic activity				
	ISIC rev. 3.1 code	Finnish TOL 2002 code	Finland	Netherland
General wholesale	513 Wholesale of household goods	5115 Agenture of household goods	6%	6%
and retailing	515 Wholesale of machinery,	5114 Agenture of machinery		
	equipment and supplies	and equipment		
	519 Other wholesale	5119 Agenture activities		
	521 Non specialised retail trade	52630 Non-specialised retail trade		
	in stores	in stores		
	523 Other retail trade of new	52499 Retail trade n.e.c.		
	goods in specialised stores	52630 Other retail trade not in		
	525 Retail trade not in stores	stores		
General	601Transport via railways	601Transport via railways	6%	6%
transportation	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	6321 Other supporting transport		
	activities	activities		
	6304 Activities of travel agencies	633 Activities of travel agencies		
	and tour operators;	and other tourist assistance		
	tourist assistance activities n.e.c.	activities n.e.c.		
	6309 Activities of other transport	634 Activities of other transport		
	agencies	agencies		
	6411 National post activities	6412 National post activities		
	6412 Courer activities other than	6413 Courer activities other than		
	national post activities	national post activities		
Telephony and	6420 Telecommunications	642 Telecommunications	6%	6%
internet	7240 Database activities and on-	7241 Database and network		
	line distribution of electronic	services		
	content			

Notes

ECONOMIC CONTRIBUTION 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, and 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.

Publication Series of the Finnish Copyright Institute

The Finnish Copyright Institute, established within the Finnish Copyright Society, publishes in its Publication Series studies, articles, research reports etc. Furthermore, the Institute publishes materials on legislation, preparatory legislative documents and case law.



Address of the Institute: Lauttasaarentie I • FIN-00200 HELSINKI Phone +358-9-6810 1279 • Telefax +358-9-673 374 E-mail: maire.wikholm@copyrightsociety.fi



Ministry of Education and Culture



Turun yliopisto University of Turku