



Economic Contribution Of Copyright-Based Industries In Finland 2013–2015

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| Tiivistelmä | <p>Tämän selvityksen tarkoituksena oli mitata tekijänoikeustoimialojen taloudellista vaikutusta Suomen talouteen vuosina 2013, 2014 ja 2015 käyttäen Maailman henkisen omaisuuden järjestön (WIPO) kehittämää ja vuonna 2015 uudistamaa metodologiaa sekä tehdä vertailua muissa maissa tehtyihin vastaaviin tutkimuksiin. Keskeiset tulokset:</p> <ul style="list-style-type: none">• Vuonna 2015 tekijänoikeustoimialojen yhteenlaskettu jalostusarvo oli 5,38 % Suomen bruttokansantuotteesta ja oli määrältään 11,27 mrd euroa. Tekijänoikeustoimialojen työntekijämäärä oli yhteensä 136 617 työntekijää, mikä on 5,61 % Suomen koko työvoimamäärästä.• Vuodesta 2000 vuoteen 2015 keskeisten tekijänoikeustoimialojen taloudelliset vaikutukset kasvoivat kohtalaisesti. Näiden toimialojen yhteenlaskettu jalostusarvo vuonna 2015 oli 4,14 % Suomen BKT:sta (3,28 % vuonna 2000) ja määrältään 8,67 mrd euroa.• Suomen BKT kasvoi 3,04 % vuodesta 2013 vuoteen 2015 ja vastaavana aikana tekijänoikeustoimialojen jalostusarvo kasvoi absoluuttisesti 12,73 %.• Vuonna 2015 kaksi suurinta keskeistä tekijänoikeustoimialaa olivat tietokoneohjelmistot ja tietokannat sekä kustannustoiminta ja painaminen, jotka edustavat suunnilleen 85% keskeisten tekijänoikeustoimialojen kumulatiivisesta jalostusarvosta.• Vuodesta 2013 vuoteen 2015 keskeisistä tekijänoikeustoimialoista eniten kasvoivat jalostusarvon suhteen ohjelmistokehitys, kun taas lehdistön ja kirjallisuuden sekä radio- ja televisiotoiminnan suhteellinen vaikutus pieneni.• WIPO:n opas tekijänoikeustoimialojen taloudellisten vaikutusten tutkimiseksi on lisännyt eri maissa tehtyjen tutkimusten vertailtavuutta. Kansainvälisessä vertailussa Suomi sijoittuu korkealle keskeisten tekijänoikeustoimialojen vaikutusten osalta, mutta alemmas kaikkien tekijänoikeustoimialojen vaikutusten vertailussa. | | |
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| Referat | <p>Syftet med denna utredning var att mäta upphovsrättssektorernas ekonomiska konsekvenser för Finlands ekonomi 2013, 2014 och 2015 med hjälp av metodologi som utvecklats av Världspannsorganisationen för den intellektuella äganderätten (WIPO) och som reformerades 2015 samt jämföra resultaten med motsvarande studier i andra länder.</p> <p>Centrala resultat:</p> <ul style="list-style-type: none">• År 2015 var upphovsrättssektorernas totala förädlingsvärde 5,38 % av Finlands BNP och värdet uppgick till 11,27 mrd euro. Upphovsrättssektorerna hade sammanlagt 136 617 anställda, vilket motsvarade 5,61 % av hela arbetskraften i Finland.• Från 2000 till 2015 ökade de centrala upphovsrättssektorerna ekonomiska konsekvenser måttligt. År 2015 var dessa sektors totala förädlingsvärde 4,14 % av Finlands BNP (3,28 % 2000) och uppgick till 8,67 mrd euro.• Finlands BNP ökade med 3,04 % från 2013 till 2015, och under samma period ökade upphovsrättssektorernas förädlingsvärde med 12,73 % absolut sett.• År 2015 var de två största upphovsrättssektorerna programvara och databaser samt förlags- och tryckeriverksamhet. Dessa står för ca 85 % av det kumulativa förädlingsvärdet inom de centrala upphovsrättssektorerna.• Från 2013 till 2015 ökade förädlingsvärdet inom programvaruutveckling mest bland de viktigaste upphovsrättssektorerna, medan den relativa inverkan av press och litteratur samt radio- och televisionsverksamheten minskade.• WIPO:s handbok om upphovsrättssektorernas ekonomiska konsekvenser har ökat jämförbarheten mellan studier i olika länder. I en internationell jämförelse ligger Finland högt när det gäller konsekvenserna av de centrala upphovsrättssektorerna, men placeringen är sämre när man jämför konsekvenserna av alla upphovsrättssektorer. | | |
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| <p>Abstract</p> <p>The purpose of the present study was to measure the economic contribution of copyright-based industries to the Finnish economy in 2013, 2014 and 2015 using the World Intellectual Property Organization's (WIPO) revised methodology in this measurement and to compare the Finnish findings to the results of similar studies completed in other countries.</p> <p>The key findings of the study include the following:</p> <ul style="list-style-type: none"> • The combined value added of copyright-based industries represented 5.38 percent of the Finnish GDP in 2015 and amounted to €11.27 billion and the combined number of employees in the copyright-based industries amounted to 136 617 and represented 5.61 percent of the total employment in Finland in 2015. • From the year 2000 to the year 2015 the economic contribution of core copyright industries has shown a moderate growth. The combined value added of core copyright industries represented 4.14 percent of the Finnish GDP in 2015 (3.28 percent in 2000) amounting to €8.67 billion. • Compared to the Finnish GDP growth of 3.04 percent between 2013 and 2015, the value added of core copyright industries in absolute terms grew by 12.73 percent. • In 2015, the two largest core copyright industries, software and databases and press and literature, accounted for approximately 85 percent of the cumulative value added of the core copyright industries in Finland. • From 2013 to 2015, in the core copyright industries the most prominent growth, in terms of value added, took place in the software industry, whereas the relative contribution of the press and literature and radio and television industry decreased. • The revised 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. Finland ranks high when it comes to the contribution of the core copyright industries but lower in terms of overall copyright contribution. | | | |
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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. Previous studies in Finland have shown that the economic contribution of the so-called copyright-based industries can exceed that of traditional industries like the production of food and beverages and the manufacture of electronics and equipment.

The purpose of the present study was three-fold:

- To measure the economic contribution of copyright-based industries to the Finnish economy in 2013, 2014 and 2015.
- To provide insight into the World Intellectual Property Organization (WIPO) revised 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 copyright-based industries represented 5.38 percent of the Finnish GDP in 2015 and amounted to €11.27 billion.
- The combined number of employees in the copyright-based industries amounted to 136 617 and represented 5.61 percent of the total employment in Finland in 2015.
- From the year 2000 to the year 2015 the economic contribution of core copyright industries has shown a moderate growth.
- The combined value added of core copyright industries represented 4.14 percent of the Finnish GDP in 2015 (3.28 percent in 2000) amounting to €8.67 billion.

- Compared to the Finnish GDP growth of 3.04 percent between 2013 and 2015, the value added of core copyright industries in absolute terms grew by 12.73 percent.
- In 2015, the two largest core copyright industries, software and databases and press and literature, accounted for approximately 85 percent of the cumulative value added of the core copyright industries in Finland.
- From 2013 to 2015, the most prominent growth in core copyright industries, in terms of value added, took place in the software industry, whereas the contribution of the press and literature, and radio and television industries decreased relatively most.
- The relative proportion of workforce in the core copyright industries decreased slightly during the same period. The total number of employees in the core copyright industries decreased by 3.0 percent, while the employed labour force in Finland declined by approximately 1 percent.
- In 2015, the interdependent copyright industries (activities related to copyright protected materials) had a combined value added of €1.27 billion (0.60% of GDP) and employed 13 480 employees (0.55 % of the total labour force).
- Production and sales in the paper industry amounted to approximately 62 % of the total value added of the interdependent copyright industries in 2015.
- Exports of copyrighted works relating to core copyright industries amounted to €10.17 billion in 2015, representing 13.2 percent of Finland's total exports. The respective value of the imports was €4.58 billion, which amounted to 5.9 percent of total imports. This produced a trade surplus of €5.59 billion.
- Exports relating to interdependent copyright industries totalled €1 648 million in 2015. Approximately 76 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. The WIPO Guide was revised in 2015 and this study applies the revised methodology. However, even further development of the methodology through international cooperation and national research is welcomed in order to harmonise the research methods. Finland ranks high when it comes to the contribution of the core copyright industries but lower in terms of overall copyright contribution.

1 Introduction

In modern societies, intangible assets have received increasing attention during the last decades. Intangible factors are regarded as key value-drivers in economies and intangible assets are estimated to form the essence of many companies' competitive advantage. The term "creative economy" has itself come to symbolise a new, global awareness of the role of creativity and innovation, which is underpinned by intellectual property rights and their contribution to economic, social, and cultural development (WIPO 2015). Growth supported by intellectual property has rapidly come to the fore of policy objectives in the last decade with the increased emphasis on the creative or knowledge economy (Towse 2011). Clear increase in the amount of digitised 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 knowledge-based economies and that intangible goods and services form the basis of growth and development.

Copyright¹ is one of the main branches of intellectual property. It applies to "every production in the literary, scientific and artistic domain, whatever may be the mode or form of its expression" (Art.2. Berne Convention for the Protection of Literary and Artistic Works). Copyright is a legal concept that enables the creators of copyright protected material to decide upon the production, distribution and use of the material. 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 holder's rights. In Finland, copyright protection is governed by the Copyright Act (8.7.1961/404), which has been amended and modified several times since its coming into force. Latest amendment took place in 2015.

The copyright legislation is national but the concept of copyright as well as the protective elements, have been a subject for international treaties for a relatively long time now. The copyright industries operate based on the same principles because most countries have joined and implemented the major international conventions in the field of copyright and

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

related rights. One hundred and sixty-seven countries are bound by the legal provisions and rights recognised by the Berne Convention for the Protection of Literary and Artistic Works (Berne Convention), the foundation of the international copyright legal system. Nearly one hundred countries have implemented the WIPO Copyright Treaty (WCT), the WIPO Performances and Phonograms Treaty (WPPT), and the Rome Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations (the Rome Convention) (WIPO 2015).

The economic rationale for copyright is that without this protection, others could free ride on the efforts of creators and hence suppress the supply of creative works (OECD 2015). Works protected by copyright as well as other protected subject matter differ from tangible goods. Works protected by copyright - especially works in digital form but also works multiplied in tangible copies, can be used by many persons at the same time without the individual value of consumption being reduced. For intangible goods such as copyrighted works, the fixed costs of producing the original first copy tend to be high, while the variable costs for reproducing and marketing it are often very low. Copyright is seen to rectify market failure due to the partial non-excludability of copyright works and the distinctive cost-structure of copyright industries. (Handke 2010). Copyright protection is needed to ensure that the creator of a work or the rights holder of other subject matter is rewarded for the exploitation of the work or other production. By creating legal safeguards for protected material and by enforcing these protective legislative measures, laws, and legal enactments, nations can transform the development of copyright industries into important business sectors (Hargreaves 2011). A survey of the copyright industries implies a study of the economic activities related to the exercise of these specific rights (WIPO 2015).

The basis for studying the economic contribution of copyright is the recognition that it is a private property right. Property rights are defined as "the ability of individuals to own, buy, sell and use their property in a market economy" (WIPO 2015). Research addressing the economic importance or impact of copyright industries first emerged in the 1970s. The first studies were published in the USA (1977), Canada (1977) and Australia (1981). Several other studies followed thereafter. Research addressing the economic contribution of copyright has broadly adopted a similar kind of methodology but there were some differences in the applied methodologies, especially as the industries included varied, which made the comparison of the findings difficult. The Finnish Ministry of Education and Culture was active to in 2002 to launch an initiative at the World Intellectual Property Organization (WIPO) 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" (WIPO 2003). The WIPO Guide on Surveying the Economic Contribution of the Copyright-Based Industries was published in 2003. Since then the methodolo-

gy defined in the WIPO Guide has been widely adopted and currently nearly 50 countries around the world have engaged the WIPO methodology in surveying of the economic performance of their copyright sector.

The WIPO methodology has the following steps to study the economic contribution of copyright-based industries: identification and classification of industries, data collection, data analysis and analysis and presentation of results. The WIPO Guide provides instructions on which industries it considers copyright-relevant. It lists sector codes according to the International Standard Industrial Classification (ISIC) and divides copyright-relevant sectors into four categories, namely core copyright industries, interdependent copyright industries, partial copyright industries and non-dedicated industries². In 2015 WIPO published a revised guide on surveying the economic contribution of the copyright-based industries.

The need to revise and develop the methodology arose from several reasons. Copyright industries have developed and the convergence of media and technology has brought about profound changes in the characteristics of some economic activities. This required a review of the groupings within copyright industries. Important changes have taken place in the international industrial classification system (ISIC) and the new classification system provides industry codes that are better suited to the current reality of the creative economy. More unified approach to treat of the level of dependence on copyright in specific non-core sectors was needed. The revised WIPO Guide also attempts to provide approaches which allow countries with less advanced statistical systems to produce credible results without embarking on costly field surveys, while still respecting the principles laid out in the guide. The revised WIPO Guide also suggests that, in addition to value added, employment and foreign trade, a second generation of indicators should be considered. (WIPO 2015)

Digitalisation has changed the way works protected by copyright and other protected subject matter are created, produced, disseminated and used. This has led to the emergence of new business models and reinforced the role of the Internet as the main marketplace for the distribution and access to copyright-protected content. The digitalization has transformed social interactions, facilitated entirely new industries and undermined others (Greenstein et al. 2011). The revised WIPO Guide attempts to include all copyright-based industries in the calculations, including the ones arisen through the digital change. A detailed analysis of the effects of the digitalisation to the copyright-based industries would require an analysis of the sub-sectors of the industries listed in the WIPO Guide. And the analysis should done over long period of time. Unfortunately, such analysis is not possible within the scope of this study, but remains for future research to address.

² More detailed description of each category is provided in the Chapter 2.

The WIPO methodology relies on the statistical data provided by the national or international statistical organisations. The aim is to survey the economic contribution of copyright-based industries and to provide quantifiable characteristics for this contribution. The methodology 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. The WIPO Guide outlines the methodology of the survey, justifies the choice of indicators, describes their characteristics and elaborates on existing approaches to their measurement. The WIPO methodology does not address all economic aspects related to copyright. For example the economic impact of copyright law itself, the social effects of copyright, the valuation of the copyright assets are left for other methodological development and additional research. Applying the current methodology to surveying the economic contribution of copyright industries provides an overview of the size of the creative sector. The methodology does not expand into impact studies, nor does it attempt to indicate any causalities. Therefore the results should always be interpreted with caution in the national context and taken only as indicators of size, which are useful for making international comparisons and for monitoring trends (WIPO 2015).

The economic contribution of copyright industries has been previously addressed in six studies in Finland: 1984, 1991 (using data from 1988), 2000 (1997 data), 2008 (data from 2000, 2003, 2004 and 2005), 2010 (data from 2005, 2006, 2007 and 2008) and 2014 (data from 2009, 2010, 2011 and 2012). The first three studies were published before the WIPO Guide and thus could not exploit its guidelines, but used a similar approach. The study that was published in 2008 used the WIPO guidelines but, in parallel, applied the methodology of the 2000 study and presented two sets of results. The studies published in 2010 and 2014 as well as the current study will apply the WIPO methodology.

The report is structured as follows. Chapter 2 describes the copyright-based industries and the methodology of the study. 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 the Ministry of Education and Culture. The purpose of the study is to measure the economic contribution of copyright-based industries from 2013 to 2015 by applying the methodology defined in the WIPO Guide on Surveying the Economic Contribution of the Copyright Industries 2015 Revised Edition.

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

2.1 The Copyright-based Industries

The mental process of creating copyrighted subject matter is the initial act of creating economic value out of copyright protected material. The creation process of copyright protected material forms the basic element relevant for the copyright's economic contribution. Thereafter works need to be modified, packaged, reproduced and distributed in order to be used. A distinction should be made between a work which is protected by copyright and the "means of delivery" by which the work appears in the market and is made available for consumption. For example a song is protected by copyright, but a music CD or file is a means of delivery. Copyright itself only refers to the intellectual property aspect and not to the means of delivery. The means of delivery acts as an intermediary between the underlying copyright and the market. (WIPO 2015). 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. Figure 1 describes the activities related to the production, dissemination 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, dissemination 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. These layers reflect the flow copyrighted material from the original creator to the consumer. They do not always represent the borderlines between different industries involved in copyright value creation, since there are activities overlapping several layers within single industries.

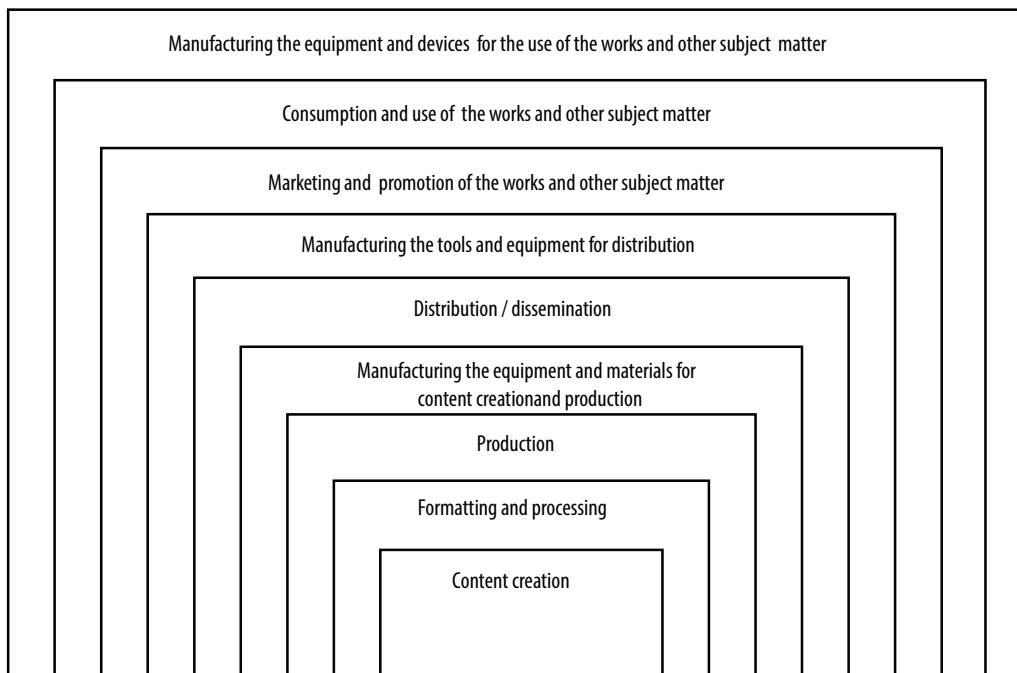


Figure 1. Layers of economic activities related to the production, packaging and distribution of material protected by copyright and related rights (Sinervo & Picard 2000)

Defining the copyright-based industries and categorising them are the primary tasks when measuring the economic contribution of copyright. This means that one has to decide which industries are included in the study, and then to put them into appropriate categories according to the extent to which their activities are based on copyright. The WIPO Guide 2015 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. For each category a short description, based on the WIPO Guide, is presented below.

The core copyright industries are industries which are wholly engaged in the creation, production and manufacture, performance, broadcasting, communication and exhibition, dissemination and sale of works and other protected subject matter. The core copyright industries as a category could not exist, or would be significantly different, without copyright in works or other subject matter. These industries include, for example, press and literature, motion pictures, recorded music, music publishing, radio and television broadcasting, and software.

Interdependent copyright industries are industries which are engaged in the production, manufacture and sale, and renting or leasing of equipment. Their function is wholly or primarily to facilitate the creation, production, or use of works and other protected subject matter. The interdependent copyright industries include activities characterized by their

complementarity with the core copyright industries because they are jointly consumed; for example, there is no television programming unless there is a television. The interdependent copyright industries support the use of copyright content in a crucial way, but they are in turn dependent on the availability of copyright works, hence their complementarity. 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 and scanners; 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 manufacture, performance, broadcasting, communication and exhibition, and 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.

Non-dedicated support industries are those in which a portion of the activities is related to facilitating broadcast communication and the distribution or sale 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 the Copyright Factors

When analysing the economic contribution of any copyright-based industry, the general question is whether or not all the products of an industry identified in an ISIC code are copyright products. The problem is how to determine the industries whose products cannot be fully attributed to copyright and how to identify the portion which can be considered to be attributable to copyright. In the studies addressing economic contribution of copyright-based industries, it is generally adopted that for core copyright industries, the

contribution is counted as 100 per cent. 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. WIPO Guide (2015) suggests some approaches which can be used to establish the copyright factors. One is a sampling technique by using questionnaires and interviews of industry representatives in order to find out which part of industries' activities is related to copyrighted works. In addition to sampling, one can attempt to analyse the components which make up each sector and the scale of activity associated with each component in relation to copyrighted works. Carrying out a sampling research is time consuming and costly. When such research is not available, the ratios used in previous national studies or comparable research done elsewhere can be taken into account when establishing the copyright factors.

In this study, time and resource constraints did not allow field research in order to set the copyright factors. Therefore, the copyright factors for this study need to rely on existing studies. When estimating copyright factors using data from comparable countries, one should use data from countries with similar legal frameworks, production practices, working conditions, or other economically significant factors (WIPO 2015). By the year 2017, nearly 50 other countries (presented in Table 16) had conducted surveys in accordance with the WIPO Guide. In this sense these studies are comparable with the results of the Finnish study. Table 16 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. At the time of this study, there were nine studies in the European Union countries that followed the WIPO Guide, namely Bulgaria, Croatia, France, Hungary, Latvia, Lithuania, the Netherlands, Romania and Slovenia. Taking into account the size of the economy, production structure and economy's dependence on foreign trade the researchers of this study concluded that the data from the Dutch study is most appropriate for the purpose of this study. Thus, for interdependent and partial copyright industries the copyright factors from the Dutch study, published in 2014, are used in this study. This is also in line with the previous study carried out in Finland. In the Dutch study, published in 2014, the copyright factors of an earlier Dutch study (2008) were used, although the report also presented the figures of Singapore and Hungary for comparison. The copyright factors for core, interdependent, partial and non-dedicated support industries are shown the Tables 1 to 4.

The copyright factor of non-dedicated support industries is most commonly determined on the basis of the WIPO Guide. According to the WIPO Guide to derive the copyright factor for the group of non-dedicated support industries, an assumption could be made that the broad non-dedicated support industries serve the copyright industries and other

non-copyright industries in the same ratios as their respective size in the economy. The formula for the copyright factor that can be used is thus:

$$\text{Factor} = \frac{\{(Core - d) + (Interdependent - d) + (Partial - d)\}}{GDP-D}$$

Where d = dedicated distribution industries and

D = the three non-dedicated support industries

Calculated according to the formula above the copyright factor non-dedicated support industries in this study is 4.85 percent.

Table 1. Copyright factors of the core copyright industries

| | Copyright factors | |
|---------------------------------------|-------------------|-------------|
| | Finland | Netherlands |
| Press and literature | 100 % | 100 % |
| Music, theatrical productions, operas | 100 % | 100 % |
| Motion picture and video | 100 % | 100 % |
| Radio and television | 100 % | 100 % |
| Photography | 100 % | 100 % |
| Software and databases | 100 % | 100 % |
| Visual and graphic arts | 100 % | 100 % |
| Advertising | 100 % | 100 % |
| Copyright collecting societies | 100 % | 100 % |

Table 2. Copyright factors of the Interdependent copyright industries

| | Copyright factors | |
|---|-------------------|-------------|
| | Finland | Netherlands |
| TV sets , radios, VCRs, CD and DVD players, electronic game equipment | 32,5 % | 32,5 % |
| Computers and equipment | 32,5 % | 32,5 % |
| Musical instruments | 31,7 % | 31,7 % |
| Photographic and cinematographic instruments | 31,7 % | 31,7 % |
| Photocopiers | 30,0 % | 30,0 % |
| Blank recording material | 25,0 % | 25,0 % |
| Paper | 25,0 % | 25,0 % |

Table 3. Copyright factors of the partial copyright industries

| | Copyright factors | |
|--------------------------------------|-------------------|-------------|
| | Finland | Netherlands |
| Apparel, textiles and footwear | 5,8 % | 5,8 % |
| Jewellery and coins | 26,0 % | 26,0 % |
| Other crafts | 39,3 % | 39,3 % |
| Furniture | 8,8 % | 8,8 % |
| Household goods, china and glass | 0,9 % | 0,9 % |
| Wall covering and carpets | 2,0 % | 2,0 % |
| Toys and games | 44,0 % | 44,0 % |
| Architecture, engineering, surveying | 8,1 % | 8,1 % |
| Interior design | 12,1 % | 12,1 % |
| Museums | 36,8 % | 36,8 % |

Table 4. Copyright factors of the non-dedicated support industries

| | Copyright factors | |
|---------------------------------|-------------------|-------------|
| | Finland | Netherlands |
| General wholesale and retailing | 4,85 % | 6,0 % |
| General transportation | 4,85 % | 6,0 % |
| Information and communications | 4,85 % | 6,0 % |

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

2.3 Collection of Data

This study is based on statistical data on copyright industries between 2013 and 2015. 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 non-copyright related activities of firms in copyright industries and the copyright-related 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 collective rights management organisations' statistics. The values of the foreign trade of copyrighted goods and services come from Finnish Foreign Trade Statistics. The value added has been calculated using the median of 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 operations to the relevant copyright-related 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 of turnover, value added, and number of employees for the copyright-based industries in Finland. Data from these industries was gathered for the years 2013, 2014 and 2015 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 slightly increased during the years under examination; while in 2013 this contribution was 5.08 percent, the respective figure for 2015 was 5.38 percent. The combined value added for copyright-based industries in 2013 was €10.33 billion; the figure for 2015 was €11.27 billion.

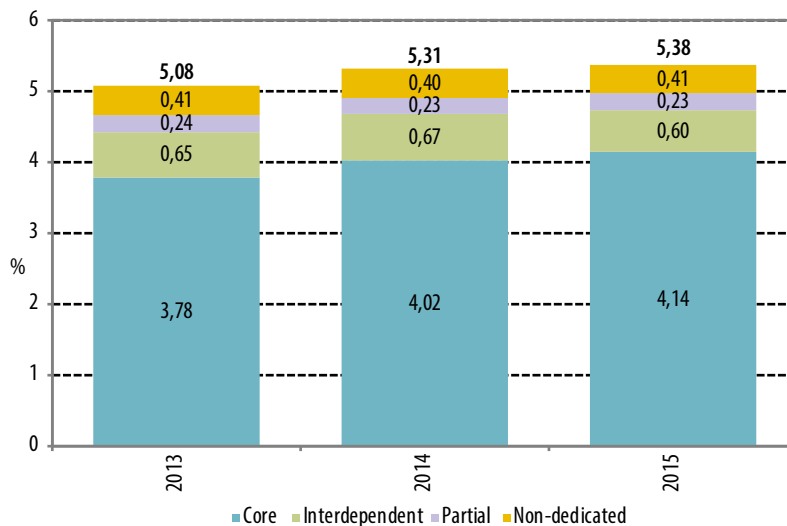


Figure 2. Value added of the copyright-based industries as a share of GDP, %

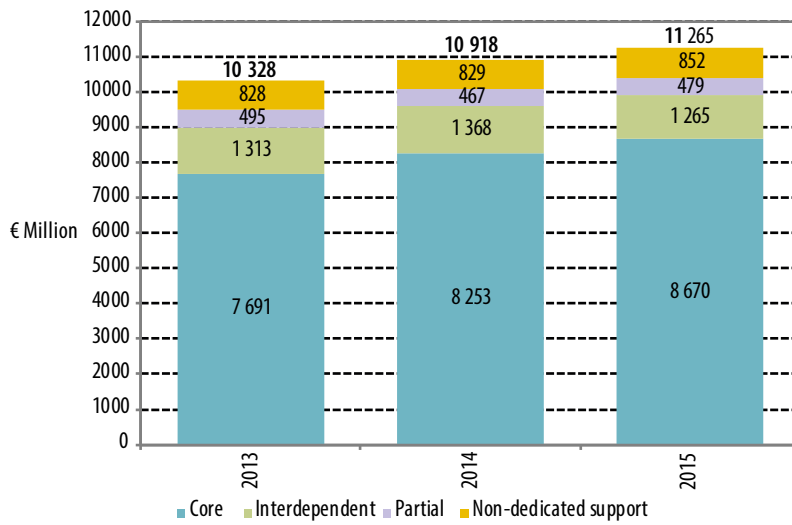


Figure 3. Value added of the copyright-based industries, € Million

The core copyright industries in Finland contribute more to GDP than food, metal or machinery industries in the time period between 2013 and 2015.

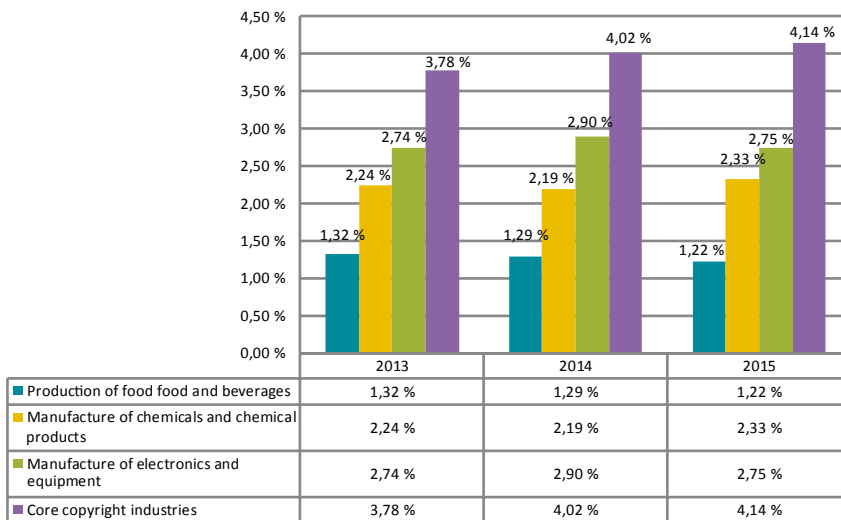
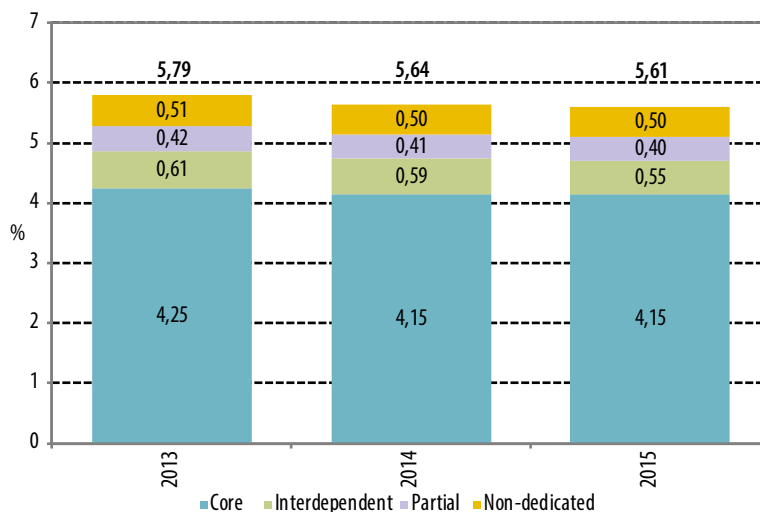


Figure 4. Contribution of the core copyright industries to GDP in comparison with selected other industries

Table 5. Value added of the copyright-based industries in Finland³

| | 2013 | | | 2014 | | | 2015 | | |
|----------------|----------------------|-----------------------------|-------------------------------|----------------------|-----------------------------|-------------------------------|----------------------|-----------------------------|-------------------------------|
| | 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 | 3,78 | 7 691 | n/a | 4,02 | 8 253 | 7,31 | 4,14 | 8 670 | 5,05 |
| Interdependent | 0,65 | 1 313 | n/a | 0,67 | 1 368 | 4,19 | 0,60 | 1 265 | -7,55 |
| Partial | 0,24 | 495 | n/a | 0,23 | 467 | -5,74 | 0,23 | 479 | 2,50 |
| Non-dedicated | 0,41 | 828 | n/a | 0,40 | 829 | 0,13 | 0,41 | 852 | 2,68 |
| Total | 5,08 | 10 328 | n/a | 5,31 | 10 918 | 5,71 | 5,38 | 11 265 | 3,18 |

The combined number of employees in the copyright-based industries amounted to 142 268 in 2013 (5.79 percent of the total employed workforce) and 136 617 in 2015 (5.61 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. Both the total number of employees in copyright-based industries and the relative proportion of this workforce decreased between 2013 and 2015. While the total number of employees in core copyright industries decreased by 3.0 percent, the employed labour force in Finland declined by 0.8 percent (see Figure 6). The activity most decreasing the relative share of the total workforce of core copyright industries was press and literature.

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

³ The annual change figures from 2012 to 2013 have not been presented because 2012 figures have not been calculated according to the guidelines represented in the WIPO Guide on Surveying the Economic Contribution of the Copyright Industries 2015 Revised Edition.

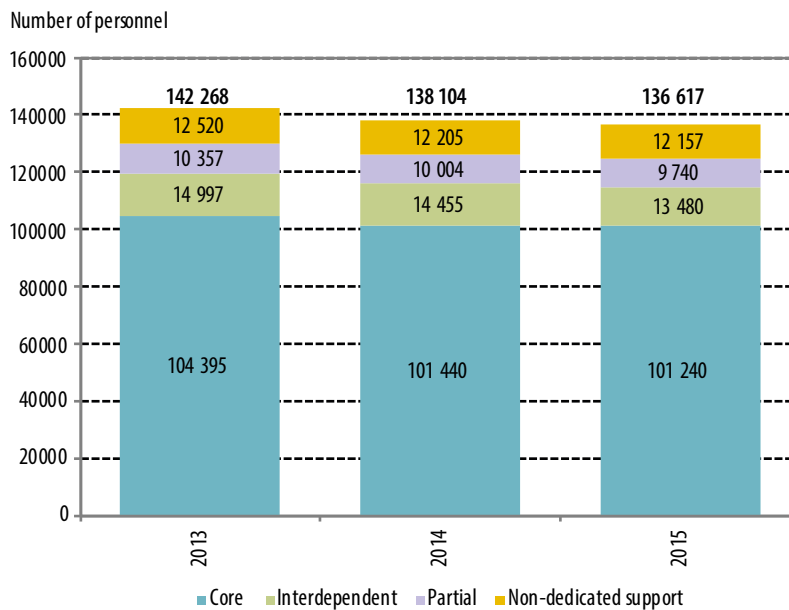


Figure 6. Number of employees in the copyright-based industries

Table 6. Employees in the copyright-based industries in Finland

| | 2013 | | | 2014 | | | 2015 | | |
|----------------|--------------------------------------|---------------------------|------------------------------|--------------------------------------|---------------------------|------------------------------|--------------------------------------|---------------------------|------------------------------|
| | 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 | 4,25 | 104 395 | n/a | 4,15 | 101 440 | -2,83 | 4,15 | 101 240 | -0,20 |
| Interdependent | 0,61 | 14 997 | n/a | 0,59 | 14 455 | -3,61 | 0,55 | 13 480 | -6,74 |
| Partial | 0,42 | 10 357 | n/a | 0,41 | 10 004 | -3,41 | 0,40 | 9 740 | -2,64 |
| Non-dedicated | 0,51 | 12 520 | n/a | 0,50 | 12 205 | -2,51 | 0,50 | 12 157 | -0,40 |
| Total | 5,79 | 142 268 | n/a | 5,64 | 138 104 | -2,93 | 5,61 | 136 617 | -1,08 |

In 2015, the two largest core copyright industries, software and databases and press and literature, accounted for approximately 85 percent of the combined contribution of core copyright industries in terms of value added. The largest core copyright industry, software and databases, contributed the highest value added with 67.9 percent of the core copyright sectors. In second place in terms of value added (17.1 %) was press and literature. These two sub-sectors were followed by advertising for which the value added was approximately 6 percent.

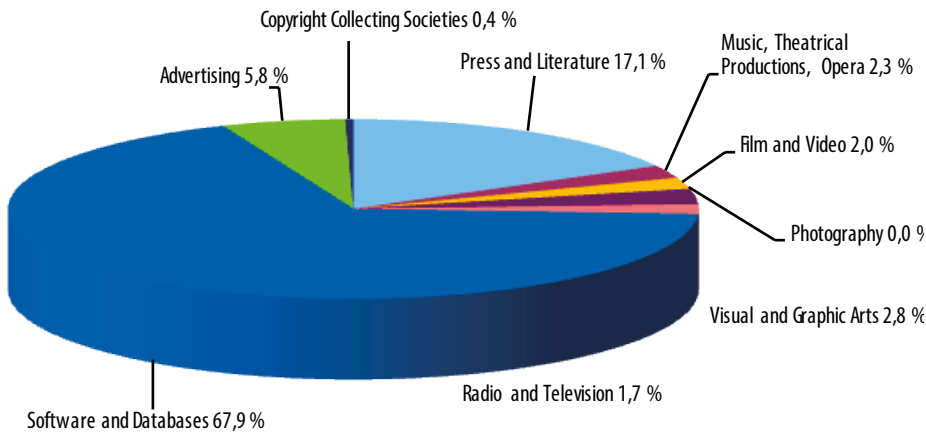


Figure 7. Breakdown of the value added of the core copyright industries into sub-sectors, 2015

In 2015, the sub-sector software and databases comprised 54.0 percent of the total employment of the core copyright sectors. Press and literature accounted for 23.3 percent, advertising comprised approximately 8 percent and visual and graphic arts 5 percent of the total employment of the core copyright sectors.

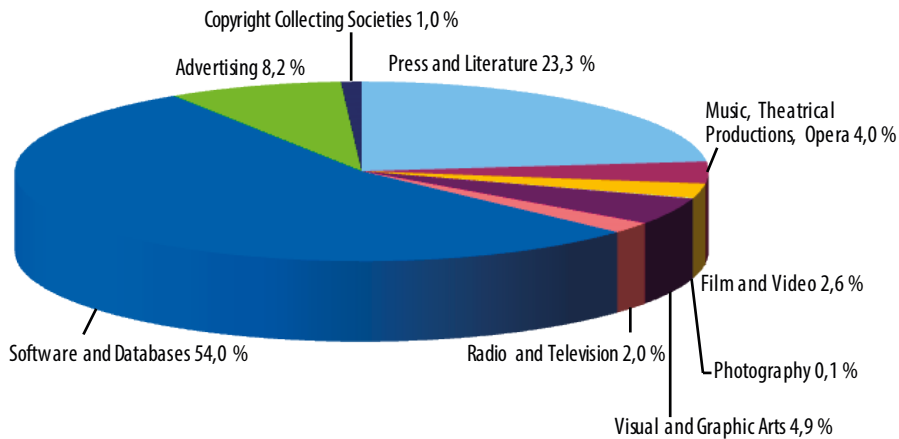


Figure 8. Breakdown of the employment of the core copyright industries into sub-sectors, 2015

Table 7. Economic contribution of the copyright-based industries in Finland, 2013

| | Turnover (€ million) | Value added (€ million) | % of GDP | Employees | % of employed labour force |
|---|-------------------------|----------------------------|-------------|----------------|----------------------------------|
| Core copyright industries | | | | | |
| Press and Literature | 4 371 | 1 670 | 0,82 | 26 140 | 1,06 |
| Music, Theatrical Productions, Opera | 1 146 | 188 | 0,09 | 3 961 | 0,16 |
| Film and Video | 498 | 155 | 0,08 | 2 832 | 0,12 |
| Photography | 8 | 5 | 0,00 | 117 | 0,00 |
| Visual and Graphic Arts | 609 | 236 | 0,12 | 5 217 | 0,21 |
| Radio and Television | 755 | 232 | 0,11 | 2 373 | 0,10 |
| Software and Databases | 11 425 | 4 675 | 2,30 | 53 994 | 2,20 |
| Advertising | 1 690 | 527 | 0,26 | 8 917 | 0,36 |
| Copyright Collecting Societies | 8 | 4 | 0,00 | 842 | 0,03 |
| Total core copyright industries | 20 511 | 7 691 | 3,78 | 104 395 | 4,25 |
| Interdependent copyright industries | | | | | |
| TV sets, radios, VCRs, CD players, DVD players etc. | 8 367 | 360 | 0,18 | 5 849 | 0,24 |
| Computers and Equipment | 1 104 | 150 | 0,07 | 1 878 | 0,08 |
| Musical Instruments | 27 | 5 | 0,00 | 141 | 0,01 |
| Photographic and cinematographic instruments | 191 | 64 | 0,03 | 1 096 | 0,04 |
| Photocopiers | 96 | 33 | 0,02 | 425 | 0,02 |
| Blank recording material | 240 | 32 | 0,02 | 430 | 0,02 |
| Paper | 4 724 | 668 | 0,33 | 5 177 | 0,21 |
| Total interdependent copyright industries | 14 750 | 1 313 | 0,65 | 14 997 | 0,61 |
| Partial copyright industries | | | | | |
| Apparel, textiles and footwear | 204 | 46 | 0,02 | 1 107 | 0,05 |
| Jewelry and coins | 418 | 90 | 0,04 | 2 376 | 0,10 |
| Other crafts | 76 | 16 | 0,01 | 607 | 0,02 |
| Furniture | 398 | 80 | 0,04 | 1 825 | 0,07 |
| Household goods, china and glass | 45 | 10 | 0,00 | 171 | 0,01 |
| Wall covering and carpets | 3 | 1 | 0,00 | 16 | 0,00 |
| Toys and games | 513 | 67 | 0,03 | 1 389 | 0,06 |
| Architecture, engineering, surveying | 353 | 181 | 0,09 | 2 758 | 0,11 |
| Interior design | 9 | 3 | 0,00 | 82 | 0,00 |
| Museums | 3 | 1 | 0,00 | 25 | 0,00 |
| Total partial copyright industries | 2 019 | 495 | 0,24 | 10 357 | 0,42 |
| Non-dedicated support industries | | | | | |
| General wholesale and retailing | 2 938 | 369 | 0,18 | 5 929 | 0,24 |
| General transportation | 1 060 | 365 | 0,18 | 6 018 | 0,24 |
| Telephony and internet | 213 | 94 | 0,05 | 573 | 0,02 |
| Total non-dedicated support industries | 4 212 | 828 | 0,41 | 12 520 | 0,51 |
| Total copyright-based industries | 41 492 | 10 328 | 5,08 | 142 268 | 5,79 |

Table 8. Economic contribution of the copyright-based industries in Finland, 2014

| | Turnover (€ million) | Value added (€ million) | % of GDP | Employees | % of employed labour force |
|---|-------------------------|----------------------------|-------------|----------------|----------------------------------|
| Core copyright industries | | | | | |
| Press and Literature | 4 239 | 1 560 | 0,76 | 23 899 | 0,98 |
| Music, Theatrical Productions, Opera | 1 126 | 207 | 0,10 | 4 128 | 0,17 |
| Film and Video | 488 | 150 | 0,07 | 2 683 | 0,11 |
| Photography | 8 | 4 | 0,00 | 102 | 0,00 |
| Visual and Graphic Arts | 606 | 242 | 0,12 | 5 140 | 0,21 |
| Radio and Television | 741 | 275 | 0,13 | 2 085 | 0,09 |
| Software and Databases | 12 957 | 5 300 | 2,58 | 54 041 | 2,21 |
| Advertising | 1 635 | 508 | 0,25 | 8 470 | 0,35 |
| Copyright Collecting Societies | 13 | 7 | 0,00 | 891 | 0,04 |
| Total core copyright industries | 21 812 | 8 253 | 4,02 | 101 440 | 4,15 |
| Interdependent copyright industries | | | | | |
| TV sets, radios, VCRs, CD players, DVD players etc. | 7 191 | 355 | 0,17 | 5 686 | 0,23 |
| Computers and Equipment | 1 166 | 158 | 0,08 | 1 801 | 0,07 |
| Musical Instruments | 26 | 5 | 0,00 | 126 | 0,01 |
| Photographic and cinematographic instruments | 185 | 64 | 0,03 | 1 117 | 0,05 |
| Photocopiers | 93 | 33 | 0,02 | 440 | 0,02 |
| Blank recording material | 206 | 32 | 0,02 | 407 | 0,02 |
| Paper | 4 669 | 722 | 0,35 | 4 878 | 0,20 |
| Total interdependent copyright industries | 13 535 | 1 368 | 0,67 | 14 455 | 0,59 |
| Partial copyright industries | | | | | |
| Apparel, textiles and footwear | 194 | 41 | 0,02 | 1 014 | 0,04 |
| Jewelry and coins | 386 | 75 | 0,04 | 2 170 | 0,09 |
| Other crafts | 73 | 14 | 0,01 | 541 | 0,02 |
| Furniture | 382 | 72 | 0,04 | 1 716 | 0,07 |
| Household goods, china and glass | 44 | 9 | 0,00 | 168 | 0,01 |
| Wall covering and carpets | 2 | 1 | 0,00 | 14 | 0,00 |
| Toys and games | 522 | 66 | 0,03 | 1 479 | 0,06 |
| Architecture, engineering, surveying | 354 | 184 | 0,09 | 2 799 | 0,11 |
| Interior design | 10 | 4 | 0,00 | 78 | 0,00 |
| Museums | 2 | 1 | 0,00 | 26 | 0,00 |
| Total partial copyright industries | 1 968 | 467 | 0,23 | 10 004 | 0,41 |
| Non-dedicated support industries | | | | | |
| General wholesale and retailing | 2 944 | 378 | 0,18 | 5 877 | 0,24 |
| General transportation | 1 068 | 360 | 0,18 | 5 778 | 0,24 |
| Telephony and internet | 205 | 92 | 0,04 | 549 | 0,02 |
| Total non-dedicated support industries | 4 217 | 829 | 0,40 | 12 205 | 0,50 |
| Total copyright-based industries | 41 533 | 10 918 | 5,31 | 138 104 | 5,64 |

Table 9. Economic contribution of the copyright-based industries in Finland, 2015

| | Turnover (€ million) | Value added (€ million) | % of GDP | Employees | % of employed labour force |
|---|-------------------------|----------------------------|-------------|----------------|----------------------------------|
| Core copyright industries | | | | | |
| Press and Literature | 4 079 | 1 479 | 0,71 | 23 554 | 0,97 |
| Music, Theatrical Productions, Opera | 1 082 | 202 | 0,10 | 4 001 | 0,16 |
| Film and Video | 502 | 171 | 0,08 | 2 658 | 0,11 |
| Photography | 8 | 4 | 0,00 | 93 | 0,00 |
| Visual and Graphic Arts | 605 | 240 | 0,11 | 4 953 | 0,20 |
| Radio and Television | 775 | 150 | 0,07 | 2 052 | 0,08 |
| Software and Databases | 14 332 | 5 887 | 2,81 | 54 682 | 2,24 |
| Advertising | 1 622 | 504 | 0,24 | 8 274 | 0,34 |
| Copyright Collecting Societies | 58 | 32 | 0,02 | 973 | 0,04 |
| Total core copyright industries | 23 064 | 8 670 | 4,14 | 101 240 | 4,15 |
| Interdependent copyright industries | | | | | |
| TV sets, radios, VCRs, CD players, DVD players etc. | 5 036 | 189 | 0,09 | 4 988 | 0,20 |
| Computers and Equipment | 1 215 | 160 | 0,08 | 1 781 | 0,07 |
| Musical Instruments | 26 | 5 | 0,00 | 120 | 0,00 |
| Photographic and cinematographic instruments | 186 | 69 | 0,03 | 1 127 | 0,05 |
| Photocopiers | 86 | 30 | 0,01 | 401 | 0,02 |
| Blank recording material | 160 | 26 | 0,01 | 306 | 0,01 |
| Paper | 4 727 | 786 | 0,38 | 4 756 | 0,20 |
| Total interdependent copyright industries | 11 436 | 1 265 | 0,60 | 13 480 | 0,55 |
| Partial copyright industries | | | | | |
| Apparel, textiles and footwear | 185 | 42 | 0,02 | 965 | 0,04 |
| Jewelry and coins | 401 | 70 | 0,03 | 1 934 | 0,08 |
| Other crafts | 69 | 12 | 0,01 | 513 | 0,02 |
| Furniture | 372 | 72 | 0,03 | 1 592 | 0,07 |
| Household goods, china and glass | 40 | 9 | 0,00 | 157 | 0,01 |
| Wall covering and carpets | 2 | 1 | 0,00 | 13 | 0,00 |
| Toys and games | 525 | 70 | 0,03 | 1 595 | 0,07 |
| Architecture, engineering, surveying | 383 | 199 | 0,09 | 2 861 | 0,12 |
| Interior design | 12 | 4 | 0,00 | 79 | 0,00 |
| Museums | 3 | 1 | 0,00 | 31 | 0,00 |
| Total partial copyright industries | 1 992 | 479 | 0,23 | 9 740 | 0,40 |
| Non-dedicated support industries | | | | | |
| General wholesale and retailing | 2 866 | 383 | 0,18 | 5 843 | 0,24 |
| General transportation | 1 062 | 373 | 0,18 | 5 768 | 0,24 |
| Telephony and internet | 216 | 95 | 0,05 | 546 | 0,02 |
| Total non-dedicated support industries | 4 144 | 852 | 0,41 | 12 157 | 0,50 |
| Total copyright-based industries | 40 635 | 11 265 | 5,38 | 136 617 | 5,61 |

4 Collective Management Organisations

The main function of collective management organisations (CMO's)⁴ is to collect royalties for the specific uses of copyright protected works, and to distribute these revenues as remunerations to the right-holders for the use of their works. In the end of year 2015 there was six⁵ 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), Sanasto (representing the authors and translators of literary works), Teosto (representing composers, lyricists, arrangers and music publishers) and Tuotos (representing audio-visual producers).

Collecting a remuneration for the reproduction of copyrighted work for private use via Teosto's Private Copying Unit (Hyvitysmaksuyksikkö) has ended on 31st of December 2014. Starting from 2015 Finnish Government will fund the compensation for the reproduction of a copyrighted work for private use from the State budget. The amount of compensation is defined by an independent study of the reproduction of copyrighted works for private use in Finland. The Ministry of Education and Culture confirms the distribution of the compensating funds as direct compensation to the authors and as indirect compensation to the authors for their common purposes, e.g. as grants to creative workers.

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. There are timing differences in collecting and distributing the remunerations and compensations and not all collected remunerations and compensations end up directly to copyright holders. CMO's have their

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

5 Currently there are seven collective management organisations operating: Filmex (representing actors) was founded already in 2012, but it did not become active until 2016, when it distributed first remunerations to actors

operative costs and part of the remunerations and compensations are distributed as general grants. Table 11 shows the collected and distributed remunerations and compensations of the Finnish collective management organisations in 2015.

Table 10. Remunerations and compensations collected and distributed by the collective management organisations in 2015 (€1 000) (Source: the annual reports of the copyright collecting societies)

| 1 000 € | Gramex* | Kopiosto | Kuvasto** | Sanasto | Teosto*** | Tuotos | Altogether |
|--|---------|----------|-----------|---------|-----------|--------|------------|
| Remunerations and compensations collected | 20 000 | 31 381 | 739 | 7 174 | 60 997 | 1 376 | 121 667 |
| from Finland | 19 500 | 31 191 | 739 | 7 172 | 57 871 | 1 328 | 117 801 |
| from abroad | 500 | 190 | - | 2 | 3 126 | 48 | 3 866 |
| Remunerations and compensations distributed | 19 300 | 17 484 | 489 | 6 779 | 49 168 | 953 | 94 173 |
| to Finland | 10 800 | 13 436 | 489 | 6 777 | 23 601 | 476 | 55 579 |
| to abroad | 8 500 | 4 048 | - | 2 | 25 567 | 477 | 38 594 |

* Gramex figures of remunerations and compensations distributed include also national and international remunerations from earlier years

** Kuvasto figures of collected remunerations and compensations include also compensation for private copying and reprography of visual arts

*** Teosto figures of collected remunerations and compensations include also royalties from Nordic Copyright Bureaus' recording rights

Collective management organisations distribute the major portion of the collected royalties and payments to the respective copyright-holders. Remunerations are normally distributed at least 6 months after royalties are collected, but in some cases in the following year, or sometimes even several years 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 also an example of this, since the annual distribution has been higher than collected remunerations in 2005 (Table 11), simply because the distribution includes also remunerations from earlier years. The ratio between remunerations distributed and collected varies between different organisations from 55 percent to 96 percent in 2015 (Table 11). Both the relatively low ratio of Kopiosto and the high ratio of Gramex are explained by the previously mentioned time shifts between collecting and distribution of remunerations.

As stated part of the royalties collected is distributed as grants through the Finnish Music Foundation (MES), which was founded in 2012 for promoting and supporting Finnish music, both performing and creative. MES continues the funding activities of ESEK (The Finnish Performing Music Promotion Centre) and LUSES (The Foundation for the Promotion of Finnish Music), which have finished their activities at the end of year 2012. They both – ESEK as a part of Gramex and LUSES closely related to Teosto – supported creative activities

of their own field of expertise. A similar organisation is AVEK (The Promotion Centre for Audio-visual Culture) which is a part of Kopiosto. AVEK is partly funded by the compensating funds of private copying.

Furthermore, the portion of distributed remunerations has slightly decreased in certain collecting societies and increased in others between 2005 and 2015. Although entirely comparable figures of remunerations flows over time are hard to come by, on a general level it can be stated that the monetary amounts of royalties, both collected and distributed, have increased significantly between 2005 and 2015, roughly estimated 1.5-times increase in ten years.

Table 11. Ratio between remunerations distributed and compensations collected by copyright societies as a percentage 2005, 2008, 2012 and 2015 (Sources: Gramex, Kopiosto, Kuvasto, Sanasto, Teosto and Tuotos)

| | 2005 | 2008 | 2012 | 2015 |
|----------|-------|------|------|------|
| Gramex | 109,1 | 82,6 | 69,9 | 96,5 |
| Kopiosto | 88,7 | 85,3 | 85,2 | 55,7 |
| Kuvasto | 71,0 | 97,5 | 61,2 | 66,2 |
| Sanasto | - | - | 95,6 | 94,5 |
| Teosto | 88,1 | 82,7 | 84,1 | 80,6 |
| Tuotos | 82,7 | 45,7 | 70,5 | 69,3 |

5 Cross-border Flow of Copyright Remunerations

This section presents the foreign trade of certain goods and services 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 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 products⁶. 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 remunerations 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.

Exports of copyrighted works relating to core copyright industries amounted to €10 172 million in 2015, representing 13.2 percent of Finland's total exports (11.4 % in 2014 and 10.2 % in 2013). The respective value of the imports was €4 583 million, which amounted to 5.9 percent of total imports (6.2 % in 2014 and 5.6 % in 2013). This produced a trade surplus of €5 589 million. In 2015, the trade surplus of the core copyright industries was €5 589 million. The most significant categories of copyrighted material in terms of total export value were computer services and the royalties and licence fees of all industries. The same categories were also important in terms of imports. In addition, the import value of

⁶ 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.

advertising and related services was much greater than their export value in 2015. In information services and press and literature, imports exceeded slightly the value of respective Finnish exports in 2015.

Table 12. Core copyright industry related exports 2013–2015

| | 2013 | | 2014 | | 2015 | |
|--|--------------|--------------|--------------|--------------|---------------|--------------|
| | M€ | % | M€ | % | M€ | % |
| Press and literature | 150 | 1,9 % | 136 | 1,6 % | 132 | 1,3 % |
| Recorded media | 13 | 0,2 % | 10 | 0,1 % | 6 | 0,1 % |
| Visual and graphic art works | 3 | 0,0 % | 5 | 0,1 % | 3 | 0,0 % |
| Computer services | 4 981 | 61,7 % | 6 369 | 72,9 % | 7 276 | 71,5 % |
| Information services | 41 | 0,5 % | 63 | 0,7 % | 87 | 0,9 % |
| Advertising and related services | 183 | 2,3 % | 258 | 3,0 % | 394 | 3,9 % |
| Audiovisual and related services | 20 | 0,3 % | 27 | 0,3 % | 24 | 0,2 % |
| Other personal, cultural and recreational services | 15 | 0,2 % | 18 | 0,2 % | 36 | 0,4 % |
| Royalties and licence fees | 2 666 | 33,0 % | 1 851 | 21,2 % | 2 214 | 21,8 % |
| Total | 8 073 | 100 % | 8 737 | 100 % | 10 172 | 100 % |

Source: Finnish Board of Customs Foreign Trade Statistics

Table 13. Core copyright industry related imports 2013–2015

| | 2013 | | 2014 | | 2015 | |
|--|--------------|--------------|--------------|--------------|--------------|--------------|
| | M€ | % | M€ | % | M€ | % |
| Press and literature | 177 | 3,4 % | 167 | 3,5 % | 148 | 3,2 % |
| Recorded media | 54 | 1,0 % | 39 | 0,8 % | 39 | 0,8 % |
| Visual and graphic art works | 17 | 0,3 % | 7 | 0,2 % | 6 | 0,1 % |
| Computer services | 2 129 | 40,6 % | 2 090 | 43,4 % | 2 235 | 48,8 % |
| Information services | 66 | 1,3 % | 84 | 1,7 % | 89 | 1,9 % |
| Advertising and related services | 1 227 | 23,4 % | 1 512 | 31,4 % | 1 219 | 26,6 % |
| Audiovisual and related services | 112 | 2,1 % | 67 | 1,4 % | 55 | 1,2 % |
| Other personal, cultural and recreational services | 24 | 0,4 % | 29 | 0,6 % | 42 | 0,9 % |
| Royalties and licence fees | 1 443 | 27,5 % | 818 | 17,0 % | 750 | 16,4 % |
| Total | 5 248 | 100 % | 4 814 | 100 % | 4 583 | 100 % |

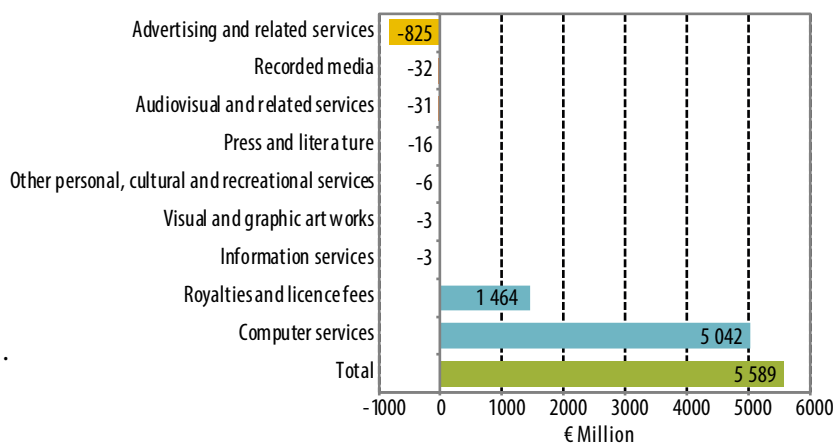
Source: Finnish Board of Customs Foreign Trade Statistics

Table 14. Core copyright industry related trade balance in 2015

| | Export | Import | Trade balance |
|--|---------------|--------------|---------------|
| Press and literature | 132 | 148 | -16 |
| Recorded media | 6 | 39 | -32 |
| Visual and graphic art works | 3 | 6 | -3 |
| Computer services | 7 276 | 2 235 | 5 042 |
| Information services | 87 | 89 | -3 |
| Advertising and related services | 394 | 1 219 | -825 |
| Audiovisual and related services | 24 | 55 | -31 |
| Other personal, cultural and recreational services | 36 | 42 | -6 |
| Royalties and licence fees | 2 214 | 750 | 1 464 |
| Total | 10 172 | 4 583 | 5 589 |

Source: Finnish Board of Customs Foreign Trade Statistics

The trade balance of core copyright-based industries has doubled during the years under examination; while in 2013 the trade balance was approximately €2.82 billion, the respective figure for 2015 was €5.59 billion. The largest core copyright industry, software and databases, contributed the highest increase in trade balance. In 2013 the trade balance of the software and databases industry was approximately €2.85 billion, the respective figure for 2015 was €5.04 billion.

**Figure 9.** Core copyright industry related trade balance in 2015

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 computers constitute any significant exports. Even in this category, the imports are considerably higher than exports. The interna-

tional significance of Finland in interdependent copyright industries is clearly centred on paper production.

Table 15. Interdependent copyright industry related trade balance in 2015 (Total figures)

| | Export | Import | Trade balance |
|--|--------------|--------------|---------------|
| TV sets, radios, VCRs, CD and DVD players etc. | 50 | 372 | -322 |
| Computers and equipment | 325 | 1 413 | -1 088 |
| Musical instruments | 1 | 29 | -27 |
| Photographic and cinematographic instruments | 13 | 75 | -62 |
| Photo-copiers | 2 | 45 | -43 |
| Blank recording material | 2 | 10 | -8 |
| Paper | 1 255 | 49 | 1 206 |
| Total | 1 648 | 1 993 | -345 |

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. Since the WIPO Guide was published in 2003 approximately 50 studies have been published that both apply the WIPO methodology and include comparable results.

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 16. The Economic contribution of the copyright-based industries using the WIPO methodology

| | Reference year | Value added as % of GDP | Employment as % of total employment |
|-------------------|----------------|-------------------------|-------------------------------------|
| Argentina | 2008 | 4,70 | 3,00 |
| Australia | 2014 | 7,10 | 8,70 |
| Bhutan | 2008 | 5,46 | 10,09 |
| Brunei | 2006 | 1,58 | 3,20 |
| Bulgaria | 2011* | 4,54 | 4,92 |
| Canada | 2004 | 5,38 | 5,40 |
| China | 2006 | 6,37 | 6,51 |
| Colombia | 2005 | 3,30 | 5,80 |
| Croatia | 2004 | 4,27 | 4,64 |
| Dominica | 2010 | 3,40 | 3,70 |
| Ecuador | 2015* | 4,47 | 3,47 |
| Ethiopia | 2012 | 4,73 | 4,20 |
| Finland | 2015 | 5,38 | 5,61 |
| France | 2012 | 7,02 | 1,62 |
| Grenada | 2010 | 4,60 | 3,60 |
| Hungary | 2013 | 8,25 | 7,28 |
| Indonesia | 2010 | 4,11 | 3,75 |
| Jamaica | 2005 | 4,81 | 3,03 |
| Jordan | 2006 | 2,43 | 2,88 |
| Kenya | 2007 | 5,32 | 3,26 |
| Latvia | 2000 | 5,05 | 5,59 |
| Lebanon | 2005 | 4,75 | 4,49 |
| Lithuania | 2008 | 5,40 | 4,92 |
| Malawi | 2009 | 3,46 | 3,35 |
| Malaysia | 2005 | 5,70 | 7,50 |
| Mexico | 2003 | 4,77 | 11,01 |
| Moldova | 2013 | 3,31 | 3,58 |
| Netherlands | 2011 | 6,00 | 6,90 |
| Pakistan | 2000 | 4,45 | 3,71 |
| Panama | 2006 | 6,35 | 3,17 |
| Peru | 2005 | 2,67 | 4,50 |
| Philippines | 2010 | 7,34 | 14,14 |
| Republic of Korea | 2009 | 9,89 | 6,24 |
| Romania | 2005 | 5,55 | 4,19 |
| Russia | 2004 | 6,06 | 7,30 |
| Serbia | 2012 | 4,61 | 4,06 |
| Singapore | 2004 | 6,19 | 6,21 |
| Slovenia | 2007 | 5,10 | 6,80 |

| | | | |
|--------------------------------|------|-------|------|
| South Africa | 2008 | 4,11 | 4,08 |
| St. Kitts-Nevis | 2010 | 6,60 | 3,10 |
| St. Lucia | 2010 | 8,00 | 4,40 |
| St. Vincent and the Grenadines | 2010 | 5,60 | 4,90 |
| Tanzania | 2010 | 4,28 | 5,63 |
| Thailand | 2006 | 4,48 | 2,85 |
| Trinidad & Tobago | 2011 | 4,80 | 5,00 |
| Turkey | 2011 | 2,73 | 5,40 |
| Ukraine | 2005 | 2,85 | 1,90 |
| USA | 2015 | 11,69 | 7,95 |

Source: Based on data from the World Intellectual Property Organization

* Year of issue

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 17 and 18 help to illustrate the position of the Finnish copyright-based industries. On average, the copyright-based industries comprise 5.2 per cent (median value 4.8 per cent) of the GDP of a country. In Finland the copyright-based industries comprise approximately 5.4 per cent of GDP. Therefore, Finland is somewhat above average and takes shared nineteenth position in the group of 48 countries. However, in terms of the contribution of the core copyright industries, Finland, with a contribution of 4.1 per cent, ranks ninth. When making the international comparisons one must keep in mind that the use of copyright factors in the studies vary. In some studies no copyright factors are used for interdependent copyright industries but the industries are included with 100 percent weight⁷. Obviously, this heavily affects the total contribution of copyright-based industries to the economy. Such studies include, for example, Bulgaria, China, Hungary, Jordan, Malawi, Republic of Korea, Tanzania and the United States, many of which rank higher than Finland when it comes to the total contribution of copyright-based industries.

⁷ In addition, the use or non-use of copyright factors remains unclear in some country studies.

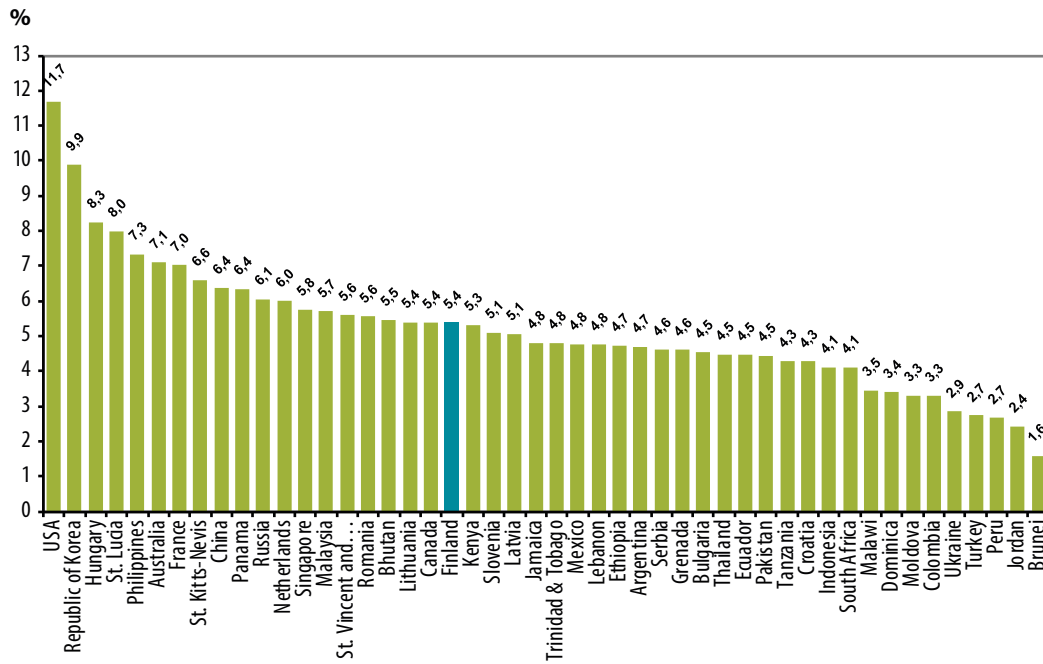


Figure 10. Value added of the total copyright-based industries as percentage of GDP per country

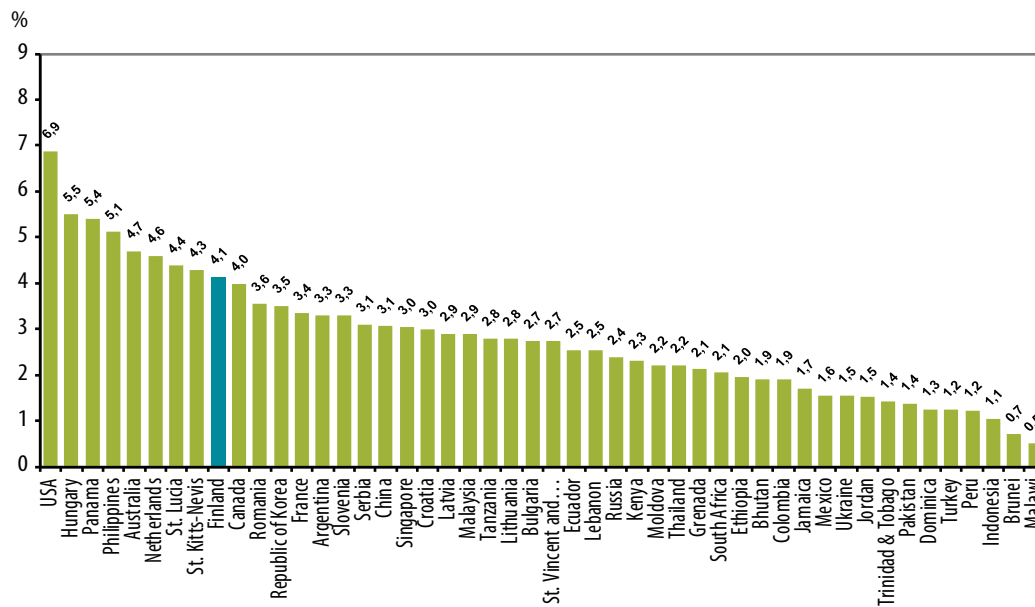


Figure 11. Value added of the core copyright industries as percentage of GDP per country

Table 17. 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 |
|-------------------|----------------|-------------|----------------|-------------|---------------|-------------|
| Argentina | 2008 | 3,30 | 0,60 | 0,20 | 0,60 | 4,70 |
| Australia | 2014 | 4,70 | 1,40 | 0,50 | 0,50 | 7,10 |
| Bhutan | 2008 | 1,90 | 0,60 | 2,20 | 0,70 | 5,46 |
| Brunei | 2006 | 0,70 | 0,10 | 0,70 | 0,08 | 1,58 |
| Bulgaria | 2011* | 2,74 | 1,08 | 0,29 | 0,38 | 4,54 |
| Canada | 2004 | 3,99 | 0,90 | 0,11 | 0,38 | 5,38 |
| China | 2006 | 3,06 | 1,92 | 0,48 | 0,92 | 6,37 |
| Colombia | 2005 | 1,90 | 0,80 | 0,30 | 0,40 | 3,30 |
| Croatia | 2004 | 2,99 | 0,88 | 0,32 | 0,07 | 4,27 |
| Dominica | 2010 | 1,25 | 0,30 | 0,68 | 1,38 | 3,40 |
| Ecuador | 2015* | 2,54 | 0,84 | 0,77 | 0,31 | 4,47 |
| Ethiopia | 2012 | 1,96 | 1,39 | 0,43 | 0,95 | 4,73 |
| Finland | 2015 | 4,14 | 0,60 | 0,23 | 0,41 | 5,38 |
| France | 2012 | 3,35 | 0,60 | 1,87 | 1,20 | 7,02 |
| Grenada | 2010 | 2,12 | 0,30 | 0,96 | 1,22 | 4,60 |
| Hungary | 2013 | 5,50 | 1,32 | 0,30 | 1,13 | 8,25 |
| Indonesia | 2010 | 1,05 | 0,65 | 2,06 | 0,36 | 4,11 |
| Jamaica | 2005 | 1,70 | 0,74 | 0,47 | 1,90 | 4,81 |
| Jordan | 2006 | 1,53 | 0,12 | 0,21 | 0,57 | 2,43 |
| Kenya | 2007 | 2,30 | 2,17 | 0,41 | 0,43 | 5,32 |
| Latvia | 2000 | 2,90 | 1,10 | 0,28 | 0,77 | 5,05 |
| Lebanon | 2005 | 2,53 | 0,71 | 0,62 | 0,89 | 4,75 |
| Lithuania | 2008 | 2,79 | 1,27 | 0,26 | 1,07 | 5,40 |
| Malawi | 2009 | 0,50 | 2,63 | 0,07 | 0,25 | 3,46 |
| Malaysia | 2005 | 2,90 | 2,10 | 0,60 | 0,10 | 5,70 |
| Mexico | 2003 | 1,55 | 1,69 | 0,85 | 0,68 | 4,77 |
| Moldova | 2013 | 2,21 | 0,42 | 0,19 | 0,49 | 3,31 |
| Netherlands | 2011 | 4,60 | 0,40 | 0,30 | 0,60 | 6,00 |
| Pakistan | 2000 | 1,37 | 0,11 | 0,98 | 1,99 | 4,45 |
| Panama | 2006 | 5,40 | 0,06 | 0,05 | 0,84 | 6,35 |
| Peru | 2005 | 1,23 | 0,28 | 0,02 | 1,14 | 2,67 |
| Philippines | 2010 | 5,11 | 1,32 | 0,51 | 0,41 | 7,34 |
| Republic of Korea | 2009 | 3,51 | 4,75 | 0,66 | 0,97 | 9,89 |
| Romania | 2005 | 3,55 | 1,08 | 0,53 | 0,39 | 5,55 |
| Russia | 2004 | 2,39 | 0,76 | 0,27 | 2,64 | 6,06 |
| Serbia | 2012 | 3,10 | 0,58 | 0,22 | 0,71 | 4,61 |
| Singapore | 2004 | 3,04 | 1,60 | 0,08 | 1,03 | 5,75 |
| Slovenia | 2007 | 3,30 | 0,60 | 0,50 | 0,60 | 5,10 |

| | | | | | | |
|--------------------------------|------|------|------|------|------|-------|
| South Africa | 2008 | 2,05 | 0,56 | 0,21 | 1,29 | 4,11 |
| St. Kitts-Nevis | 2010 | 4,29 | 0,56 | 0,93 | 0,82 | 6,60 |
| St. Lucia | 2010 | 4,38 | 0,26 | 2,13 | 1,23 | 8,00 |
| St. Vincent and the Grenadines | 2010 | 2,73 | 0,13 | 1,09 | 1,66 | 5,60 |
| Tanzania | 2010 | 2,80 | 1,37 | 0,10 | 0,00 | 4,28 |
| Thailand | 2006 | 2,21 | 1,02 | 0,71 | 0,54 | 4,48 |
| Trinidad & Tobago | 2011 | 1,41 | 0,13 | 0,97 | 2,28 | 4,80 |
| Turkey | 2011 | 1,24 | 0,39 | 0,90 | 0,20 | 2,73 |
| Ukraine | 2005 | 1,54 | 0,68 | 0,10 | 0,54 | 2,85 |
| USA | 2015 | 6,88 | 2,27 | 0,21 | 2,32 | 11,69 |

*Year of issue

In terms of employment, the copyright-based industries contributed, on average, 5.2 percent to the total amount of people employed in a country (median value 4.6 percent). In Finland, the copyright-based industries contributed a total of 5.6 percent to Finland’s employment figure, which is above the average in the group of 48 countries (ranked sixteenth). When it comes to the contribution of the core copyright industries, Finland, with a contribution of 4.2 percent, clearly exceeds the average and ranks ninth among the 48 countries. This is a slightly higher proportion than for example in the United States.

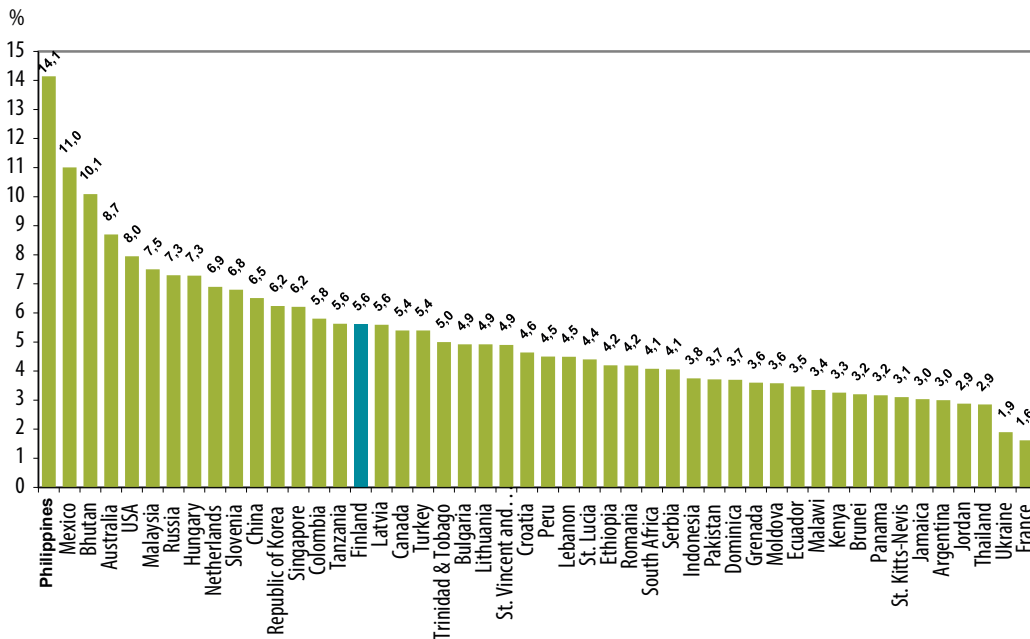


Figure 12. Employment in the copyright-based industries as a percentage of the total employment per country

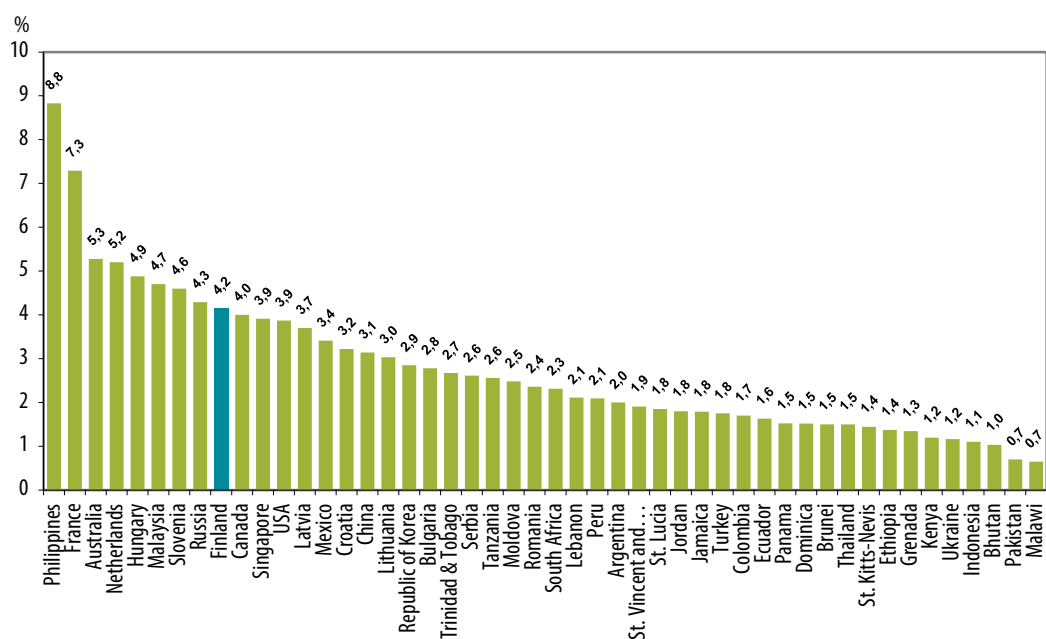


Figure 13. Employment in the core copyright industries as a percentage of the total employment per country

Table 18. Employment in the copyright-based industries as a percentage of the total employment per country

| | Reference year | Core | Interdependent | Partial | Non-dedicated | Total |
|-----------|----------------|------|----------------|---------|---------------|-------|
| Argentina | 2008 | 2,00 | 0,30 | 0,50 | 0,20 | 3,00 |
| Australia | 2014 | 5,27 | 1,59 | 0,90 | 0,93 | 8,70 |
| Bhutan | 2008 | 1,03 | 0,29 | 7,16 | 1,61 | 10,09 |
| Brunei | 2006 | 1,50 | 0,40 | 1,10 | 0,20 | 3,20 |
| Bulgaria | 2011* | 2,78 | 1,34 | 0,31 | 0,49 | 4,92 |
| Canada | 2004 | 4,00 | 0,91 | 0,16 | 0,33 | 5,40 |
| China | 2006 | 3,14 | 1,90 | 0,85 | 0,63 | 6,51 |
| Colombia | 2005 | 1,70 | 0,70 | 1,90 | 1,50 | 5,80 |
| Croatia | 2004 | 3,22 | 0,93 | 0,41 | 0,08 | 4,64 |
| Dominica | 2010 | 1,52 | 0,04 | 0,21 | 1,98 | 3,70 |
| Ecuador | 2015* | 1,63 | 0,59 | 0,75 | 0,50 | 3,47 |
| Ethiopia | 2012 | 1,37 | 1,27 | 0,33 | 1,23 | 4,20 |
| Finland | 2015 | 4,15 | 0,55 | 0,40 | 0,50 | 5,61 |
| France | 2012 | 7,29 | 3,56 | 0,30 | 1,81 | 1,62 |
| Grenada | 2010 | 1,34 | 0,38 | 0,82 | 1,05 | 3,60 |
| Hungary | 2013 | 4,88 | 0,82 | 0,36 | 1,22 | 7,28 |
| Indonesia | 2010 | 1,10 | 0,27 | 2,05 | 0,33 | 3,75 |

| | | | | | | |
|--------------------------------|------|------|------|------|------|-------|
| Jamaica | 2005 | 1,79 | 0,31 | 0,23 | 0,68 | 3,03 |
| Jordan | 2006 | 1,80 | 0,08 | 0,20 | 0,80 | 2,88 |
| Kenya | 2007 | 1,20 | 0,75 | 1,04 | 0,27 | 3,26 |
| Latvia | 2000 | 3,70 | 0,70 | 0,44 | 0,75 | 5,59 |
| Lebanon | 2005 | 2,11 | 0,73 | 0,70 | 0,95 | 4,49 |
| Lithuania | 2008 | 3,03 | 0,80 | 0,26 | 0,82 | 4,92 |
| Malawi | 2009 | 0,65 | 2,43 | 0,11 | 0,17 | 3,35 |
| Malaysia | 2005 | 4,70 | 1,60 | 0,90 | 0,20 | 7,50 |
| Mexico | 2003 | 3,41 | 3,65 | 2,53 | 1,41 | 11,01 |
| Moldova | 2013 | 2,48 | 0,33 | 0,23 | 0,54 | 3,58 |
| Netherlands | 2011 | 5,20 | 0,40 | 0,50 | 0,70 | 6,90 |
| Pakistan | 2000 | 0,70 | 0,04 | 1,37 | 1,60 | 3,71 |
| Panama | 2006 | 1,52 | 1,20 | 0,31 | 0,13 | 3,17 |
| Peru | 2005 | 2,09 | 0,14 | 0,07 | 2,20 | 4,50 |
| Philippines | 2010 | 8,83 | 3,27 | 1,21 | 0,82 | 14,14 |
| Republic of Korea | 2009 | 2,85 | 1,59 | 0,67 | 1,12 | 6,24 |
| Romania | 2005 | 2,36 | 0,58 | 0,82 | 0,43 | 4,19 |
| Russia | 2004 | 4,29 | 0,75 | 0,56 | 1,69 | 7,30 |
| Serbia | 2012 | 2,61 | 0,44 | 0,33 | 0,69 | 4,06 |
| Singapore | 2004 | 3,91 | 1,06 | 0,19 | 0,77 | 5,94 |
| Slovenia | 2007 | 4,60 | 0,80 | 0,70 | 0,70 | 6,80 |
| South Africa | 2008 | 2,31 | 0,51 | 0,23 | 1,03 | 4,08 |
| St. Kitts-Nevis | 2010 | 1,44 | 0,45 | 0,81 | 0,41 | 3,10 |
| St. Lucia | 2010 | 1,85 | 0,33 | 1,09 | 1,14 | 4,40 |
| St. Vincent and the Grenadines | 2010 | 1,91 | 0,17 | 1,01 | 1,81 | 4,90 |
| Tanzania | 2010 | 2,56 | 2,14 | 0,29 | 0,64 | 5,63 |
| Thailand | 2006 | 1,50 | 0,29 | 0,68 | 0,39 | 2,85 |
| Trinidad & Tobago | 2011 | 2,67 | 1,73 | 0,20 | 0,41 | 5,00 |
| Turkey | 2011 | 1,75 | 0,72 | 2,53 | 0,40 | 5,40 |
| Ukraine | 2005 | 1,16 | 0,46 | 0,08 | 0,20 | 1,90 |
| USA | 2015 | 3,87 | 1,97 | 0,25 | 0,86 | 7,95 |

*Year of issue

7 Conclusions

This study covered the economic contribution of copyright-based industries during the years 2013, 2014 and 2015 in Finland. The relative contribution of all copyright-based industries has somewhat increased during the years under examination; while in 2013 this contribution was 5.08 percent, the respective figure for 2015 was 5.38 percent. The combined value added for the copyright-based industries was €10.33 billion in 2013 and €11.27 billion in 2015. The contribution of the core copyright industries increased from 3.78 percent in 2013 to 4.14 percent in 2015. The share of non-dedicated support industries remained the same from 2013 to 2015 while the contribution of the interdependent industries decreased from 0.65 percent in 2013 to 0.60 percent in 2015. Major reason for the change is the decrease in the TV sets, radios, etc., and electronic game equipment 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 major change in pulp and paper production heavily affects the numbers of the interdependent copyright industries.

The copyright-based industries employed a total of 142 268 people in 2013 and 136 617 people in 2015. In 2013, this represented 5.79 percent of the total employed workforce, while the respective number for 2015 was 5.61 percent. Both the total number of employees in the copyright-based industries and the relative proportion of this workforce slightly decreased from 2013 to 2015. This decrease is due to the decline of the workforce in several subcategories. The biggest decreases in the number of employees has happened in the categories of press and literature, TV sets, radios, etc., advertising, jewellery and coins and paper.

When comparing this with previous studies conducted in Finland, one has to be cautious. The earlier reports do not fully apply the methodology of the revised WIPO Guide and therefore the results are not fully comparable. The new classification system of the international industrial classification system (ISIC) makes it possible to capture the core copyright industries more accurately than previously in the revised methodology. Same is true with the interdependent copyright industries and the partial copyright industries and the new classification system also reduces double inclusion of certain industries in these catego-

ries. This means that the economic contribution of core copyright industries is more likely to be higher when it is calculated according to the revised methodology than with the original one. In the interdependent copyright industries and in the partial copyright industries the effect is opposite. However, one must emphasise that the differences between the employed methodologies are not major. 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 4.14 percent by 2015. One can conclude that the economic contribution of the core copyright industries has shown a moderate growth over the past fifteen years. During the same period, the share of copyright-based industries of the total employment has also increased, although slightly less than the share of value added. Specifically, in the year 2000, the core copyright industries represented 3.96 percent of the total employed workforce, while the respective share in 2015 was 4.15 percent.

This report applied the revised WIPO Guide on Surveying the Economic Contribution of the Copyright-Based Industries, published in 2015. 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 international comparisons made in Chapter 6 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.

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 differences in the availability of statistics or industry categorisations in many countries, 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 the reports do not reveal what copyright factors have been used and what weight is given to interdependent, partial or non-dedicated support industries.

In 2015, WIPO published a revised guide on the economic contribution of the copyright-based industries. This was welcomed by the researchers. However, even further alignment of the implementation of the methodology would be desirable. One of the reasons for revising the guide was to enable a more unified approach to treat the non-core sectors and to set the copyright factors. In this respect, standardised ways of calculations or estimations would be practical. Country-specific sampling by surveys and interviews would naturally be very useful, but rarely possible. Also researcher meetings and an organised researcher 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.

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

CORE COPYRIGHT INDUSTRIES

| CATEGORY | ACTIVITIES | CORRESPONDING INDUSTRIES IN FINNISH TOL 2008 CLASSIFICATION |
|----------------------|--|---|
| PRESS AND LITERATURE | Authors, writers, translators | 90030 Artistic creation |
| | | 74300 Translation and interpretation activities |
| | | 82990 Other business support service activities n.e.c. |
| | Newspapers | 58130 Publishing of newspapers |
| | | 63910 News agencies |
| | News and feature agencies, etc. | 58140 Publishing of magazines and periodicals |
| | Magazines and periodicals | 58110 Publishing of books |
| | Book publishing | 58120 Publishing of directories etc. |
| | Cards maps, directories, and other published material | 58190 Other publishing activities |
| | | 18110 Printing of newspapers |
| | Pre-press, printing, and post press of books, magazines, newspapers, and advertising materials | 18120 Other printing |
| | | 18130 Pre-press and pre-media services |
| | | 18140 Binding and related services |
| | | 82191 Secretarial and other specialised office support activities |
| | | 82192 Mailing activities |
| | | 46492 Wholesale of books |
| | Wholesale and retail of press and literature | 47610 Retail sale of books in specialised stores |
| | | 47622 Retail sale of journals and periodicals |
| | | 47792 Second-hand bookshops |
| | | 47911 Retail sale of books, music and video recordings via mail order houses and net commerce |
| | 7729 Renting and leasing of other personal and household goods | |
| Libraries | 91010 Library and archives activities | |

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|---------------------------------------|--|---|
| MUSIC, THEATRICAL PRODUCTIONS, OPERAS | Composers, lyricists, arrangers, choreographers, directors, performers, etc. | 90030 Artistic creation |
| | Choreographers, writers | 90030 Artistic creation |
| | Directors, performers, and other personnel | 90030 Artistic creation |
| | Artistic and literary creation and interpretation | 90030 Artistic creation |
| | Support activities to the performing arts and the operation of concert and theatre halls | 90020 Support activities to performing arts |
| | | 90040 Operation of arts facilities |
| | Printing and publishing of music | 59200 Sound recording and music publishing activities |
| | Production and manufacture of recorded music | 18200 Reproduction of recorded media |
| | Wholesale, retail, and rentals of recorded music | 46431 Wholesale of electrical household appliances |
| | | 46494 Wholesale of musical instruments and supplies |
| | | 47630 Retail sale of music and video recordings in specialised stores |
| | | 77220 Renting of video tapes and disks |
| | | 77290 Renting and leasing of other personal and household goods |
| | Operation of concert and theatre halls | 90040 Operation of arts facilities |
| | Performances and allied agencies (booking agencies, ticket agencies, etc) | 90010 Performing arts |
| | | 90020 Support activities to performing arts |
| | | 79900 Other reservation service and related activities |
| MOTION PICTURE AND VIDEO | Writers, directors, actors, etc. | 90030 Artistic creation |
| | Motion picture and video production and distribution | 59110 Motion picture, video and television programme production activities |
| | | 59120 Motion picture, video and television programme post-production activities |
| | | 59130 Motion picture, video and television programme distribution activities |
| | Motion picture exhibition | 59140 Motion picture projection activities |
| | Video rentals and sales, video on demand | 77220 Renting of video tapes and disks |
| | | 46432 Wholesale of radio and television goods |
| | | 47630 Retail sale of music and video recordings in specialised stores |
| | Allied services | 18200 Reproduction of recorded media |

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| RADIO AND TELEVISION | Television program production activities | 59110 Motion picture, video and television programme production activities |
| | | 59120 Motion picture, video and television programme post-production activities |
| | | 59130 Motion picture, video and television programme distribution activities |
| | National radio and television broadcasting companies | 60100 Radio broadcasting |
| | | 60201 Television programming and broadcasting activities (excl. pay television channels) |
| | | 60202 Pay television channel activities |
| | Independent producers | 59110 Motion picture, video and television programme production activities |
| | | 59120 Motion picture, video and television programme post-production activities |
| | | 59130 Motion picture, video and television programme distribution activities |
| PHOTOGRAPHY | Studios and commercial photography | 74201 Photographic studio and other photographic activities |
| | | 74202 Photographic laboratory activities |
| SOFTWARE, DATABASES AND COMPUTER GAMES | Programming, development, and design, manufacturing | 58210 Publishing of computer games |
| | | 58290 Other software publishing |
| | | 62010 Computer programming activities |
| | | 62020 Computer consultancy activities |
| | | 62030 Computer facilities management activities |
| | | 62090 Other information technology and computer service activities |
| | Wholesale and retail pre-packaged software (business programs, video games, educational programs etc.) | 46510 Wholesale of computers, computer peripheral equipment and software |
| | | 47410 Retail sale of computers, peripheral units and software in specialised stores |
| | Database processing and publishing | 63110 Data processing, hosting and related activities |
| | | 63120 Web portals |

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|--------------------------------|--|---|
| VISUAL AND GRAPHIC ARTS | Artists | 90010 Performing arts |
| | | 90030 Artistic creation |
| | Art galleries and other wholesale and retail | 90020 Support activities to performing arts |
| | | 90040 Operation of arts facilities |
| | Picture framing and other allied services | 74201 Photographic studio and other photographic activities |
| | | 74202 Photographic laboratory activities |
| | Service related to printing | 18120 Other printing |
| | Graphic design | 90030 Artistic creation |
| | | 18120 Other printing |
| | | 74101 Graphic design activities |
| ADVERTISING | Agencies, buying services | 73111 Advertising agency activities |
| | | 73112 Direct and outdoor advertising activities |
| | | 73119 Other advertising activities |
| | | 73200 Market research and public opinion polling |
| COPYRIGHT COLLECTING SOCIETIES | Copyright Collecting Societies | 94120 Activities of professional membership organisations |

Economic Contribution of Copyright-Based Industries in Finland 2013–2015

| INTERDEPENDENT COPYRIGHT INDUSTRIES | | | Copyright factor | |
|--|-------------------------|---|--|--------|
| CATEGORY | ACTIVITIES | CORRESPONDING INDUSTRIES IN FINNISH TOL 2008 CLASSIFICATION | Finland | |
| TV sets, Radios, VCRs, CD Players, DVD Players, Cassette Players, Electronic Game Equipment, and Other Similar Equipment | Manufacture | 26300 Manufacture of communication equipment | 32,5 % | |
| | | 26400 Manufacture of consumer electronics | 32,5 % | |
| | Wholesale and retail | 46431 Wholesale of electrical household appliances | 32,5 % | |
| | | 46432 Wholesale of radio and television goods | 32,5 % | |
| | | 46499 Wholesale of other household goods n.e.c. | 32,5 % | |
| | | 47430 Retail sale of audio and video equipment in specialised stores | 32,5 % | |
| | Renting | 77290 Renting and leasing of other personal and household goods | 32,5 % | |
| | | 77390 Renting and leasing of other machinery, equipment and tangible goods n.e. | 32,5 % | |
| | Computers and Equipment | | 26200 Manufacture of computers and peripheral equipment | 32,5 % |
| | | | 46510 Wholesale of computers, computer peripheral equipment and software | 32,5 % |
| | | 47410 Retail sale of computers, peripheral units and software in specialised stores | 32,5 % | |
| | | 77330 Renting and leasing of office machinery and equipment (including computers) | 32,5 % | |
| Musical Instruments | | 32200 Manufacture of musical instruments | 31,7 % | |
| | | 46494 Wholesale of musical instruments and supplies | 31,7 % | |
| | | 47595 Retail sale of musical equipment and supplies | 31,7 % | |
| | | 7729 Renting and leasing of other personal and household good | 31,7 % | |
| Photographic and cinematographic instruments | | 26700 Manufacture of optical instruments and photographic equipment | 31,7 % | |
| | | 46433 Wholesale of photographic equipment and supplies | 31,7 % | |
| | | 46434 Wholesale of optical goods | 31,7 % | |
| | | 47782 Retail sale of photographic equipment; photography services | 31,7 % | |
| | | 47783 Retail sale of optical goods | 31,7 % | |
| | | 77390 Renting and leasing of other machinery, equipment and tangible goods n.e.c. | 31,7 % | |
| Photocopiers | | 28230 Manufacture of office machinery and equipment (except computers and peripheral equipment) | 30,0 % | |
| | | 46660 Wholesale of other office machinery and equipment | 30,0 % | |

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|-------------------------------|-------------------|--|------------------|
| Blank recording material | | 26800 Manufacture of magnetic and optical media | 25,0 % |
| | | 46521 Wholesale of telecommunication equipment | 25,0 % |
| Paper | | 17110 Manufacture of pulp | 25,0 % |
| | | 17120 Manufacture of paper and paperboard | 25,0 % |
| | | 17211 Manufacture of paper sacks and bags | 25,0 % |
| | | 17212 Manufacture of corrugated paper and paperboard and of containers of paper and paperboard | 25,0 % |
| | | 17230 Manufacture of paper stationery | 25,0 % |
| | | 17290 Manufacture of other articles of paper and paperboard | 25,0 % |
| PARTIAL COPYRIGHT INDUSTRIES | | | Copyright factor |
| CATEGORY | ACTIVITIES | CORRESPONDING INDUSTRIES IN FINNISH TOL 2008 CLASSIFICATION | Finland |
| Apparel textiles and footwear | | 14110 Manufacture of leather clothes | 5,8 % |
| | | 14120 Manufacture of workwear | 5,8 % |
| | | 14130 Manufacture of other outerwear | 5,8 % |
| | | 14140 Manufacture of underwear | 5,8 % |
| | | 14190 Manufacture of other wearing apparel and accessories | 5,8 % |
| | | 13921 Manufacture of household furnishings of textile materials | 5,8 % |
| | | 13922 Manufacture of tarpaulins, sails and other made-up textile articles | 5,8 % |
| | | 15200 Manufacture of footwear | 5,8 % |
| | | 46411 Wholesale of fabrics and yarns | 5,8 % |
| | | 46412 Wholesale of textiles | 5,8 % |
| | | 46421 Wholesale of clothing and footwear | 5,8 % |
| | | 46422 Wholesale of footwear | 5,8 % |
| | | 47511 Retail sale of fabrics | 5,8 % |
| | | 47512 Retail sale of yarns and needlework supplies | 5,8 % |
| | | 47711 Retail sale of women's clothing | 5,8 % |
| | | 47712 Retail sale of men's clothing | 5,8 % |
| | | 47713 Retail sale of children's clothing | 5,8 % |
| | | 47714 Retail sale of furs and leather clothing | 5,8 % |
| | | 47715 Retail sale of hats and caps | 5,8 % |
| | | 47719 Retail sale of clothing in non-specialized stores | 5,8 % |
| | | 47721 Retail sale of footwear and leather goods | 5,8 % |
| | | 47722 Retail sale of bags | 5,8 % |
| | | 74109 Industrial design activities | 5,8 % |

Economic Contribution of Copyright-Based Industries in Finland 2013–2015

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| Jewelry and coins | | 32110 Striking of coins | 26,0 % |
| | | 32120 Manufacture of jewellery and related articles | 26,0 % |
| | | 32130 Manufacture of imitation jewellery and related articles | 26,0 % |
| | | 46480 Wholesale of watches and jewellery | 26,0 % |
| | | 4719 Other retail sale in non-specialised stores | 26,0 % |
| | | 47770 Retail sale of watches and jewellery in specialised stores | 26,0 % |
| | | 74109 Industrial design activities | 26,0 % |
| Other crafts | | 94999 Activities of other membership organisations n.e.c. | 39,3 % |
| | | 4719 Other retail sale in non-specialised stores | 39,3 % |
| | | 47599 Retail sale of household equipment n.e.c. | 39,3 % |
| | | 74109 Industrial design activities | 39,3 % |
| Furniture | | 31010 Manufacture of office and shop furniture | 8,8 % |
| | | 31020 Manufacture of kitchen furniture | 8,8 % |
| | | 31030 Manufacture of mattresses | 8,8 % |
| | | 31090 Manufacture of other furniture | 8,8 % |
| | | 46470 Wholesale of furniture, carpets and lighting equipment | 8,8 % |
| | | 4719 Other retail sale in non-specialised stores | 8,8 % |
| | | 47591 Retail sale of furniture | 8,8 % |
| | | 74109 Industrial design activities | 8,8 % |
| Household goods, china and glass | | 23110 Manufacture of flat glass | 0,9 % |
| | | 23120 Shaping and processing of flat glass | 0,9 % |
| | | 23130 Manufacture of hollow glass | 0,9 % |
| | | 23140 Manufacture of glass fibres | 0,9 % |
| | | 23190 Manufacture and processing of other glass, including technical glassware | 0,9 % |
| | | 13910 Manufacture of knitted and crocheted fabrics | 0,9 % |
| | | 14310 Manufacture of knitted and crocheted hosiery | 0,9 % |
| | | 14390 Manufacture of other knitted and crocheted apparel | 0,9 % |
| | | 16290 Manufacture of other products of wood; manufacture of articles of cork, straw and plaiting | 0,9 % |
| | | 25990 Manufacture of other fabricated metal products n.e.c | 0,9 % |
| | | 46441 Wholesale of household articles | 0,9 % |
| | | 46442 Wholesale of household cleaning materials | 0,9 % |
| | | 47521 Non-specialized retail sale of hardware, plumbing and building materials | 0,9 % |
| | | 47522 Retail sale of paints | 0,9 % |
| | | 47523 Retail sale of kitchen and sanitary fixtures | 0,9 % |
| | | 47529 Other retail sale of hardware, plumbing and building materials | 0,9 % |

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|--------------------------------------|--|--|--------|
| | | 47594 Retail sale of household articles | 0,9 % |
| | | 74109 Industrial design activities | 0,9 % |
| Wall coverings and carpets | | 13930 Manufacture of carpets and rugs | 2,0 % |
| | | 17240 Manufacture of wallpaper | 2,0 % |
| | | 47531 Retail sale of carpets and curtains | 2,0 % |
| | | 47532 Retail sale of wallpaper and floor covering | 2,0 % |
| | | 74109 Industrial design activities | 2,0 % |
| Toys and games | | 32400 Manufacture of games and toys | 44,0 % |
| | | 46496 Wholesale of toys and games | 44,0 % |
| | | 4719 Other retail sale in non-specialised stores | 44,0 % |
| | | 47650 Retail sale of games and toys in specialised stores | 44,0 % |
| | | 74109 Industrial design activities | 44,0 % |
| Architecture, engineering, surveying | | 71110 Architectural activities | 8,1 % |
| | | 71121 Town and city planning | 8,1 % |
| | | 71122 Civil engineering activities | 8,1 % |
| | | 71123 Structural engineering activities | 8,1 % |
| | | 71124 Heating, plumbing and air-conditioning design | 8,1 % |
| | | 71125 Electrical engineering design | 8,1 % |
| | | 71126 Other construction activities | 8,1 % |
| | | 71127 Mechanical and process engineering design | 8,1 % |
| | | 71129 Other architectural and engineering activities and related technical consultancy | 8,1 % |
| Interior design | | 74102 Interior design activities | 12,1 % |
| Museums | | 91020 Museums activities | 36,8 % |
| | | 91030 Operation of historical sites and buildings and similar visitor attractions | 36,8 % |

Economic Contribution of Copyright-Based Industries in Finland 2013–2015

| NON-DEDICATED SUPPORT INDUSTRIES | | | Copyright factor |
|----------------------------------|------------|---|------------------|
| CATEGORY | ACTIVITIES | CORRESPONDING INDUSTRIES IN FINNISH TOL 2008 CLASSIFICATION | Finland |
| General wholesale and re-tailing | | 4611 Agents involved in the sale of agricultural raw materials, live animals, textile raw materials and semi-finished goods | 4,85 % |
| | | 4612 Agents involved in the sale of fuels, ores, metals and industrial chemicals | 4,85 % |
| | | 4613 Agents involved in the sale of timber and building materials | 4,85 % |
| | | 4614 Agents involved in the sale of machinery, industrial equipment, ships and aircraft | 4,85 % |
| | | 4615 Agents involved in the sale of furniture, household goods, hardware and ironmongery | 4,85 % |
| | | 4616 Agents involved in the sale of textiles, clothing, fur, footwear and leather goods | 4,85 % |
| | | 4617 Agents involved in the sale of food, beverages and tobacco | 4,85 % |
| | | 4618 Agents specialised in the sale of other particular products | 4,85 % |
| | | 4619 Agents involved in the sale of a variety of goods | 4,85 % |
| | | 4641 Wholesale of textiles | 4,85 % |
| | | 4642 Wholesale of clothing and footwear | 4,85 % |
| | | 4643 Wholesale of electrical household appliances | 4,85 % |
| | | 4644 Wholesale of china and glassware and cleaning materials | 4,85 % |
| | | 4645 Wholesale of perfume and cosmetics | 4,85 % |
| | | 4646 Wholesale of pharmaceutical goods | 4,85 % |
| | | 4649 Wholesale of other household goods | 4,85 % |
| | | 4661 Wholesale of agricultural machinery, equipment and supplies | 4,85 % |
| | | 4662 Wholesale of machine tools | 4,85 % |
| | | 4663 Wholesale of mining, construction and civil engineering machinery | 4,85 % |
| | | 4664 Wholesale of machinery for the textile industry and of sewing and knitting machines | 4,85 % |
| | | 4665 Wholesale of office furniture | 4,85 % |
| | | 4669 Wholesale of other machinery and equipment | 4,85 % |
| | | 4671 Wholesale of solid, liquid and gaseous fuels and related products | 4,85 % |
| | | 4672 Wholesale of metals and metal ores | 4,85 % |
| | | 4673 Wholesale of wood, construction materials and sanitary equipment | 4,85 % |
| | | 4674 Wholesale of hardware, plumbing and heating equipment and supplies | 4,85 % |

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| | | 4675 Wholesale of chemical products | 4,85 % |
| | | 4676 Wholesale of other intermediate products | 4,85 % |
| | | 4677 Wholesale of waste and scrap | 4,85 % |
| | | 4711 Retail sale in non-specialised stores with food, beverages or tobacco predominating | 4,85 % |
| | | 4742 Retail sale of telecommunications equipment in specialised stores | 4,85 % |
| | | 4751 Retail sale of textiles in specialised stores | 4,85 % |
| | | 4753 Retail sale of carpets, rugs, wall and floor coverings in specialised stores | 4,85 % |
| | | 4754 Retail sale of electrical household appliances in specialised stores | 4,85 % |
| | | 4759 Retail sale of furniture, lighting equipment and other household articles in specialised stores | 4,85 % |
| | | 4762 Retail sale of newspapers and stationery in specialised stores | 4,85 % |
| | | 4764 Retail sale of sporting equipment in specialised stores | 4,85 % |
| | | 4772 Retail sale of footwear and leather goods in specialised stores | 4,85 % |
| | | 4773 Dispensing chemist in specialised stores | 4,85 % |
| | | 4774 Retail sale of medical and orthopaedic goods in specialised stores | 4,85 % |
| | | 4775 Retail sale of cosmetic and toilet articles in specialised stores | 4,85 % |
| | | 4776 Retail sale of flowers, plants, seeds, fertilisers, pet animals and pet food in specialised stores | 4,85 % |
| | | 4778 Other retail sale of new goods in specialised stores | 4,85 % |
| | | 4779 Retail sale of second-hand goods in stores | 4,85 % |
| | | 4781 Retail sale via stalls and markets of food, beverages and tobacco products | 4,85 % |
| | | 4782 Retail sale via stalls and markets of textiles, clothing and footwear | 4,85 % |
| | | 4789 Retail sale via stalls and markets of other goods | 4,85 % |
| | | 4791 Retail sale via mail order houses or via Internet | 4,85 % |
| | | 4799 Other retail sale not in stores, stalls or markets | 4,85 % |

Economic Contribution of Copyright-Based Industries in Finland 2013–2015

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| General transportation | | 49 Land transport and transport via pipelines | 4,85 % |
| | | 50 Water transport | 4,85 % |
| | | 51 Air transport | 4,85 % |
| | | 5221 Service activities incidental to land transportation | 4,85 % |
| | | 5222 Service activities incidental to water transportation | 4,85 % |
| | | 5223 Service activities incidental to air transportation | 4,85 % |
| | | 5224 Cargo handling | 4,85 % |
| | | 5229 Other transportation support activities | 4,85 % |
| | | 53 Postal and courier activities | 4,85 % |
| Information and communication | | 61100 Wired telecommunications activities | 4,85 % |
| | | 61200 Wireless telecommunications activities | 4,85 % |
| | | 61300 Satellite telecommunications activities | 4,85 % |
| | | 61900 Other telecommunications activities | 4,85 % |

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%.



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Undervisnings- och kulturministeriet

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