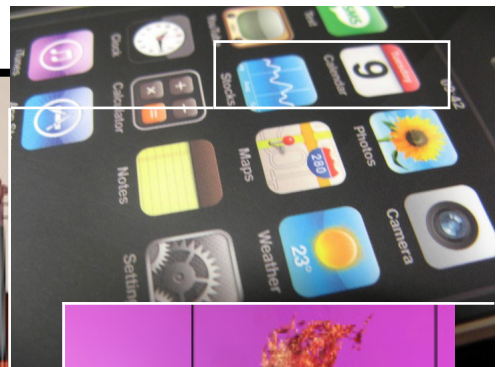


**>> GUIDE**

ON  
SURVEYING THE ECONOMIC CONTRIBUTION  
OF THE COPYRIGHT INDUSTRIES

2015 REVISED EDITION



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## TABLE OF CONTENTS

<b>INTRODUCTION</b>	<b>7</b>
<b>CHAPTER 1</b>	
<b>EXPERIENCE GAINED FROM THE IMPLEMENTATION OF THE METHODOLOGY</b>	<b>11</b>
1.1 Context	11
1.2 Major Results	13
1.3 Institutional Involvement and Implementation Modalities, Practical Arrangements, Research Procedures, and Applications of the Methodology	18
1.4 Scope and Funding	20
<b>CHAPTER 2</b>	
<b>BASIC LEGAL NOTIONS</b>	<b>21</b>
2.1 The Concept of Copyright	22
2.2 Exclusive Rights	23
2.3 Related Rights	26
2.4 Limitations to Rights	26
2.5 Legal Framework and Copyright Markets	27
<b>CHAPTER 3</b>	
<b>ECONOMIC FUNDAMENTALS OF COPYRIGHT</b>	<b>29</b>
3.1 Streamlining Terminology	30
3.2 Main Economic Characteristics of Copyright	32
3.3 Economic Functions and Consequences of Copyright Law	33
3.4 Copyright in the National Economy	36
3.4.1 Multiple Effects on the Economy	36
3.4.2 Economic Organization and the Role of the Government	36
3.5 Main Characteristics of the Creative Market	37
3.5.1 The Demand Side	38
3.5.2 The Supply Side	39
3.5.3 The Labor Markets	40

**CHAPTER 4**

<b>THE COPYRIGHT INDUSTRIES</b>	<b>42</b>
<b>4.1 Overview</b>	<b>42</b>
<b>4.2 The Core Copyright Industries</b>	<b>47</b>
4.2.1 Functional Distinctions	47
4.2.2 Statistical Distinctions	49
4.2.3 Definition and Breakdown of the Core Copyright Industries	51
4.2.4 Evolution of the Core Copyright Industries	55
<b>4.3 Interdependent Copyright Industries</b>	<b>57</b>
4.3.1 General Considerations	57
4.3.2 Definition of Interdependent Copyright Industries	59
<b>4.4 Partial Copyright Industries</b>	<b>60</b>
<b>4.5 Non-dedicated Support Industries</b>	<b>62</b>

**CHAPTER 5**

<b>FRAMEWORK OF THE STUDY</b>	<b>64</b>
<b>5.1 Organizing a study</b>	<b>64</b>
<b>5.2 Guiding Principles</b>	<b>66</b>
<b>5.3 What to Measure?</b>	<b>66</b>
<b>5.4 Size of the Copyright Industries in the National Economies</b>	<b>70</b>
5.4.1 Economic Indicators	70
5.4.2 Labor Market Indicators: Contribution to Employment and Salaries	76
5.4.3 Foreign Trade	78
<b>5.5 Performance of Copyright Industries in National Economies</b>	<b>80</b>
5.5.1 Labor Productivity	80
5.5.2 Foreign Trade Balance	82
5.5.3 Contribution of Copyright Industries to Economic Growth	83
<b>5.6 Institutionalizing the Preferred Analytical Framework</b>	<b>85</b>

**CHAPTER 6**

<b>THE MEASUREMENT PROCEDURE</b>	<b>87</b>
<b>6.1 Overview</b>	<b>87</b>
6.1.1 Basic Ideas from the SNA – Satellite Accounting	87
6.1.2 New Features	89
<b>6.2 Measurement Procedure</b>	<b>93</b>
6.2.1 Step One: Identification and Classification of the Copyright Industries and Products	94
6.2.2 Step Two: Collection of Relevant Data	98



6.2.3	Step Three: Measurement of the Contribution of Copyright Industries to the National Economy	117
6.2.4	Step Four: Analysis and Presentation of the Survey Results	133

## CHAPTER 7I

### **INFORMATION RESOURCES 137**

#### **7.1 Scope of Information Resources 137**

7.1.1	Official Statistics	138
7.1.2	Supplementary Statistics	143
7.1.3	National Professional Organizations	143
7.1.4	Specific Industry Sources	144
7.1.5	Non-Governmental Organizations	144

#### **7.2 Scope and Organization of Statistics 144**

7.2.1	The Scope of Estimates	144
7.2.2	Conceptual Issues	147
7.2.3	Challenges Posed by the Organization of Statistics	148

#### **7.3 Future Trends 150**

7.3.1	Refining the Methodology for Measuring Intangible Assets – Intellectual Property Assets	150
7.3.2	Convergence of Classifications	153

### **FINAL REMARKS 154**

### **ANNEXES 155**

Annex I	List of the Copyright Industries	155
Annex IIA	United Nations International Standard Industrial Classification Codes Corresponding to the Copyright Industries (ISIC Rev. 4)	157
Annex IIB	United Nations International Standard Industrial Classification Codes Corresponding to the Copyright Industries (ISIC Rev.3.1)	164
Annex III	Correspondence of ISIC Rev.4, CPC Rev.2 and HS 2007	170
Annex IV	European Classification Codes corresponding to the Copyright Industries	172
Annex V	Sample Questionnaire	180

### **ACKNOWLEDGMENTS 182**

### **ENDNOTES 183**

## CHARTS

Chart 1.1	Overall Contribution of CRI to GDP and Employment	14
Chart 1.2	Country Positioning Based on GDP and Employment	17
Chart 1.3	Contribution of Creative Industries to GDP and Employment by groups of industries.	18
Chart 4.1	Actual mapping of the Core Copyright (WIPO), Cultural (UNESCO, 2009) <sup>58</sup> and Creative (DCMS, 2011) Industries	44
Chart 5.1	Relative Labor Productivity Index, Selected Countries	82

## FIGURES

Figure 3.1	Creative Industries	41
Figure 5.1	Study lifecycle	64

## TABLES

Table 1.1	Previous Studies	15
Table 2.1	Types of Work Protected Under Most National Copyright Laws	23
Table 2.2	Copyright and the Scope of Respective Markets	28
Table 5.1	Cumulated Growth Rates of Values Added and National GDP in Copyright Industries, Selected Countries	84
Table 6.1	Example of the Income Statement of an Establishment under IASB rules	90
Table 6.2	Intellectual property products in Gross Fixed Capital Formation	91
Table 6.3	Supply Table for Copyright Economy	103
Table 6.4	Use Table for Copyright Economy	106
Table 6.5	An Illustration of an Input-Output Table	108
Table 6.6	Classification Changes and their Expected Effects on GDP and Gross Domestic Income	116
Table 6.7	Data for Calculation of Value Added	122
Table 6.8	Indicators of the Income Components of Value Added	123
Table 6.9	Steps in the Survey and Expected Deliverables	136
Table 7.1	Financial and Non-Financial Assets	151



## INTRODUCTION

In recent years, there has been significant interest in the economic exploitation of copyright and related rights and in their role as drivers of development in content-based industries. Copyright has taken center stage in public debates about access to information, and its relevance to daily life and to business operations has attracted the keen interest of most stakeholders in the creative economy. The term ‘creative economy’ has itself come to symbolize 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. In the twenty-first century, the role of information has also changed: it has become easier to obtain, its volume has increased astronomically, and there has been a greater demand for information and evidence in decision-making. While the new role played by copyright has driven an increased demand for evidence of its contribution to economic performance, methodologies for the collection and analysis of information related to copyright have not developed at the same pace.

In 2003, the World Intellectual Property Organization (WIPO) published a *Guide on Surveying the Economic Contribution of the Copyright-Based Industries*.<sup>1</sup> This publication sought to summarize existing experiences and to suggest a common framework within which to conduct policy research on copyright industries. It also sought to provide a system for measuring the size of copyright industries and to offer meaningful comparisons of these industries with other sectors, in each country and between countries. The methodology contained in the *Guide* has been tested and subsequently has been widely used in national surveys of the creative sector. By the end of 2014, it had been applied in over 40 countries at various levels of development and had been recognized as a credible international approach to assessing the contribution of copyright to a national economy in terms of value added, employment, and trade. It has been widely quoted and has become a reference tool for both developing and developed countries. The data collected through surveys based on the WIPO methodology have become an important source of information that has quantified the role of copyright in economic and social development.

After a decade of using the methodology, the understanding of its potential for policy-making and research has been significantly enriched, as has knowledge of its limitations and avenues for its improvement and enhanced applicability across

the globe. Over 200 researchers from around the world have contributed to the application of the methodology, adding valuable insight, introducing innovative approaches, and outlining areas for further improvement. The implementation of the methodology has highlighted a number of issues which have posed challenges to some countries, either because of a lack of appropriate data or because of the absence of a unified approach to data processing. Experience on the ground has also revealed various scenarios in different economies, posing a challenge to the production of entirely homogeneous estimates. Nonetheless, thanks to WIPO's active involvement, the results obtained have a high degree of comparability and consistency.

The application of the WIPO methodology requires an update in view of the following major developments.

- Economic realities have changed. After ten years, certain descriptions of economic activities provided in the *Guide* have become outdated. Copyright industries have developed and the convergence of media and technology has brought about profound changes in the characteristics of some economic activities. These changes require a review of the groupings within copyright industries. Experience has also demonstrated that some of the recommended approaches within the available menu of options have not been practical or fully applicable.
- The need to review the system of indicators has also become apparent. While 'value added', 'employment', and 'trade' remain important and comparable economic indicators, they are not fully capable of describing the dynamics of copyright-based economic activities. Hence, a second generation of indicators, focusing on more dynamic characteristics of economic performance, should be considered.
- Important changes have taken place in the international industrial classification system (ISIC), which has adopted Rev.4; while the *Guide* refers to Rev.3.1. The new classification system provides industry codes that are better suited to the current reality of the creative economy.
- Variations have been observed in the treatment of the level of dependence on copyright in specific non-core sectors: the so-called 'copyright factors'. A more unified approach is necessary.





- There is a need to adopt 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*.

Thus, the principal goal of this publication is to offer a revised version of the *Guide* which reflects the developments in the field and the practical lessons learned. This will enable countries to undertake new research, or update research, on the economic contribution of industries supported by copyright. The publication also addresses conceptual issues; it analyzes some of the complexities of the ongoing debate about measuring economic performance in the creative sector and considers alternative approaches. It further discusses technical issues and the correspondence of classifications, metrics, and statistical matters. Lastly, the revised *Guide* draws on specific case studies to demonstrate the role and potential of economic evidence in measuring the effect of intellectual property on development.

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.

The revision of the *Guide* started with an expert group meeting in October 2008 in Singapore, where the methodology was first piloted. The meeting, attended by key international experts, addressed conceptual and technical issues, and outlined a broad consensus on definitions, matching classification codes, information sources, industry groupings, copyright factors, minimal comparability thresholds, research design for countries with less developed statistical systems, and other matters. In subsequent years, the body of research has doubled, new issues have been raised, and new solutions have been found to existing challenges. This revision has been greatly facilitated by the government of Finland, which, from the very beginning of this process in 2002, has taken a proactive position on the economics of copyright and copyright research. The revised guidelines have been actively discussed by experts and reflect a broad consensus on the way forward. All methodologies evolve and

this edition of the *Guide* will undoubtedly require further adaptations as research and technology develop.

WIPO wishes to thank all the governments which have supported this work so far, in particular the governments of the United States of America and Finland, which have provided financial assistance for many national studies, as well as the governments of Japan and the Republic of Korea. Particular thanks go to the experts around the world who have dedicated their time and expertise to this process, and to the government officials who have facilitated, and contributed work to, the national studies. The studies have been published on the WIPO website and are actively used by policymakers, stakeholders, users, and civil society.



## CHAPTER 1

# EXPERIENCE GAINED FROM THE IMPLEMENTATION OF THE METHODOLOGY

### 1.1 Context

1. Economic research on copyright rapidly increased in the years following the publication of the *Guide* in 2003. This interest was driven by the constant search for new growth factors and by the need to quantify the economic contribution of the creative sector, thereby identifying its role as a vehicle for achieving national development goals. While creativity is a highly attractive concept, determining its link to economic performance and economic growth still requires empirical work. Hence, studies conducted following the methodology laid down in the *Guide* could be considered an important contribution to clarifying the link between copyright and economic growth. The demand for economic research on copyright industries, as recorded by WIPO, has doubled in recent years, suggesting a constant trend of increasing interest in filling the gaps in the data and in the economic analysis in this area.

2. Studies have greatly contributed to presenting copyright not only as a legal category, but also as a mechanism which helps creators to earn a living, thereby generating significant employment, wealth, and trade. Apparent as they may seem today, the economic effects of copyright had not been specifically analyzed in most countries. Copyright was considered mostly from a regulatory standpoint, which did not link it explicitly to economic policy. The WIPO methodology-based studies have contributed to demystifying the economic importance of copyright across the globe and facilitated a more balanced understanding of the concept, taking into account its role in economic development.

3. The economic analysis of copyright law has been researched by economists who focus on such aspects as the economic functions of the law and on modelling copyright law.<sup>2</sup> However, in recent years the level of interest in research intended to produce evidence for policymaking has increased significantly, which has been a driving factor in launching new studies, developing educational programs, and expanding in general the scope and orientation of work in this field. Policy initiatives have led to a more practical approach in research and the results of studies have

often driven adjustments in economic policies and legal practices and more active enforcement in support of the creative sector.

4. Research has been widely used for public outreach and awareness-raising. This is increasingly necessary in light of widespread misunderstanding of the broad social and economic objectives and functions of copyright law. The link between copyright and creativity is much better demonstrated through research on creative industries. The studies project creativity as a growth factor and facilitate discussions of the role of copyright as a development indicator and a factor to be considered when making decisions on economic policy. In this regard, the economic research produced under the WIPO guidelines has enriched the empirical data on copyright.<sup>3</sup>

5. In addition to these general objectives of economic research on copyright industries, more specific objectives underpin decisions to undertake such research. They include:

1. accurately determining the status of the trade in creative products in the context of new major international agreements such as accession to the European Union (Bulgaria, Romania, Croatia) or free trade agreements (Singapore, Mexico, China);
2. matching a rich cultural heritage with the economic performance of the creative sector (Colombia, Peru, Indonesia);
3. comparing performance in the creative sector with major trading partners and competitors (ASEAN, transition economies, the Netherlands, Finland);
4. giving priority to sectors which are not based on natural resources (Brunei, Bhutan);
5. comparing studies of copyright industries with mapping studies of culture or creativity (Colombia, Indonesia, Kenya, Lebanon, Thailand); and
6. improving data about the creative sector within a country and other country-specific objectives.

6. Interest in quantifying the contribution of copyright industries to national economies has spread around the globe. When the first edition of the *Guide* was published, only developed economies were active in this field. Since then, the situation has changed significantly. Studies have been carried out in least developed countries (Bhutan, Malawi, Tanzania); developing countries (Argentina, China, Colombia, Jamaica, Jordan, Kenya, Indonesia, Lebanon, Malaysia, the Organization of Eastern Caribbean States (OECS), Panama, Pakistan, the Philippines, Peru, Singapore,



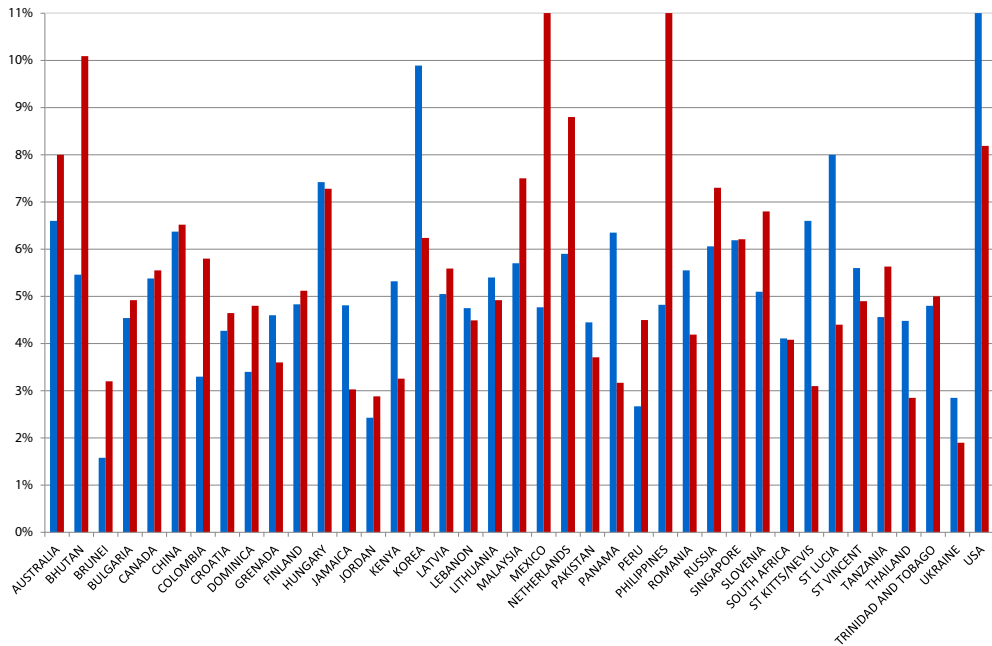
South Africa, Thailand, Trinidad and Tobago); economies in transition (Bulgaria, Croatia, Hungary, Latvia, Lithuania, Romania, Russia, Slovenia, Ukraine); and in developed economies (Australia, Canada, Finland, the Netherlands, the Republic of Korea, the United States of America). Studies are ongoing in a number of countries around the globe, and WIPO has received numerous requests for assistance with this type of research. National studies in countries at different levels of development have confirmed the applicability of the WIPO *Guide* and the adherence of many countries to its principles.

7. Several countries – Australia, Bulgaria, Canada, China, Finland, Hungary, the Netherlands, Singapore, and the United States of America – have produced systematic surveys after testing the guidelines. These have given the research a new dimension, with time series and close monitoring of trends adding to the credibility of the data and ultimately allowing for a more in-depth analysis of the creative sector. Copyright industry reports have become a trusted data set for consideration by policy circles, industry, copyright holders, and civil society in general.

## 1.2 Major Results

8. The major results of the studies are summarized in the following charts. The direct data analysis is based on two major indicators employed to measure the performance of copyright industries: contribution to GDP (%) and share of employment (%).

**Chart 1.1 Overall Contribution of CRI to GDP and Employment<sup>3</sup>**



Source: WIPO

■ % share of GDP  
■ % share of employment

9. In the countries surveyed there is a sizeable copyright industry sector, which in most countries was found to be larger than expected. This overview suggests that copyright industries make a significant overall economic contribution, in many cases bigger than traditional industries such as agriculture and social services.

10. The contribution to GDP varies significantly across countries from over 10 per cent in the USA to under 2 per cent in Brunei. With an average and median values of 5.48 per cent and 4.83 per cent respectively, three quarters of the countries have a contribution between 4 per cent and 6.5 per cent. Countries which have experienced rapid economic growth typically have an above-average share of GDP attributed to copyright industries.

11. The contribution of copyright industries to national employment is slightly higher than the contribution to GDP, with an average of 5.34 per cent and a median of 4.91 per cent. In nearly three-quarters of the countries, copyright industries contribute between 4 per cent and 7 per cent of national employment. Mexico and the Philippines have by far the highest percentage of employment in copyright industries.

Most countries with an above-average contribution from creative industries<sup>4</sup> to GDPs also exhibit above-average contributions to employment.

12. It is worth noting that some countries studied only a selection of copyright/creative industries, often as a result of national definitions or a specific national interest in particular areas. These studies did not strictly follow the approach recommended in the *Guide*; it would therefore be inappropriate to compare their results with the WIPO studies. Such studies are not included in the table below.<sup>5</sup> Some countries have updated their studies, so their figures may be different from those provided in Table 1.1.<sup>6</sup>

**Table 1.1 Previous Studies**

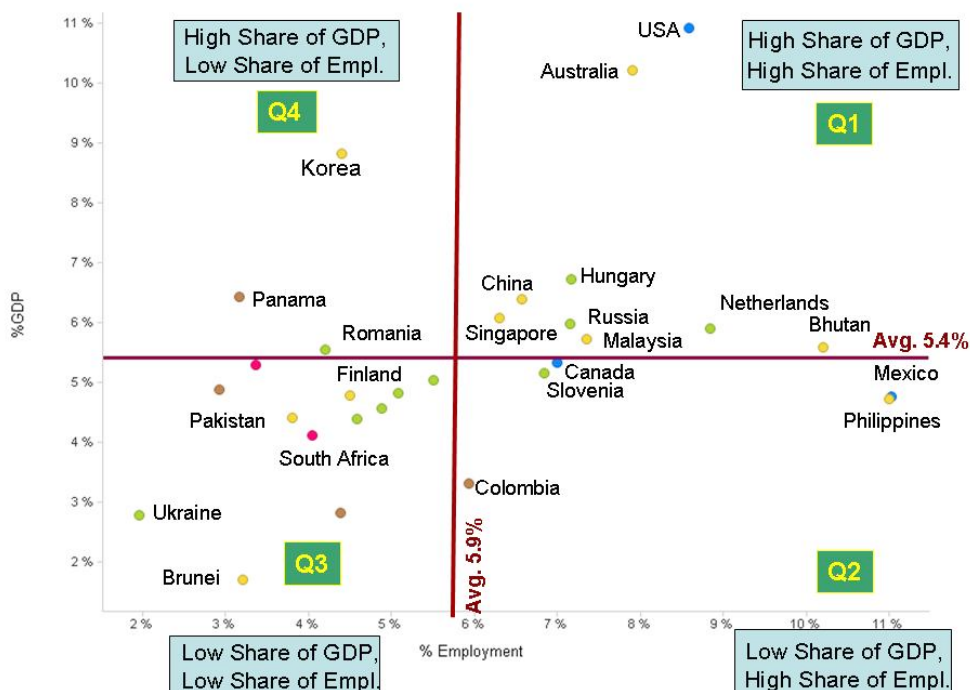
No.	COUNTRY	YEAR OF PUBLICATION	% OF GDP SHARE	% OF EMPLOYMENT SHARE
1.	Argentina	2013	4.70	3.0
2.	Australia	2011	6.60	8.00
3.	Bhutan	2011	5.46	10.09
4.	Brunei Darussalam	2011	1.58	3.20
5.	Bulgaria	2011	4.54	4.92
6.	Canada	2004	5.38	5.55
7.	China	2009	6.37	6.52
8.	Colombia	2008	3.30	5.80
9.	Croatia	2007	4.27	4.65
10.	Dominica	2012	3.40	4.80
12.	Finland	2010	4.60	3.60
13.	Grenada	2012	4.83	5.12
14.	Hungary	2010	7.42	7.28
15.	Indonesia	2013	4.11	3.75
16.	Jamaica	2007	4.81	3.03
17.	Jordan	2012	2.43	2.88
18.	Kenya	2009	5.32	3.26
19.	Latvia	2004	5.05	5.59
20.	Lebanon	2007	4.75	4.49
21.	Lithuania	2012	5.40	4.92
22.	Malawi	2013	3.46	3.35
23.	Malaysia	2008	5.70	7.50
24.	Mexico	2006	4.77	11.01
25.	Netherlands	2009	5.90	8.80

No.	COUNTRY	YEAR OF PUBLICATION	% OF GDP SHARE	% OF EMPLOYMENT SHARE
26.	Pakistan	2010	4.45	3.71
27.	Panama	2009	6.35	3.17
28.	Peru	2009	2.67	4.50
29.	Philippines	2006	4.82	11.10
30.	Republic of Korea	2012	9.89	6.24
31.	Romania	2008	5.55	4.19
32.	Russian Federation	2007	6.06	7.30
33.	Singapore	2007	6.19	6.21
34.	Slovenia	2010	5.10	6.80
35.	South Africa	2011	4.11	4.08
36.	St. Kitts and Nevis	2012	6.60	3.10
37.	St. Lucia	2012	8.00	4.40
38.	St. Vincent and the Grenadines	2012	5.60	4.90
39.	Tanzania	2012	4.56	5.63
40.	Thailand	2012	4.48	2.85
41.	Trinidad and Tobago	2011	4.80	5.00
42.	Ukraine	2008	2.85	1.90
43.	United States of America	2013	11.25	8.35

13. Based on their position along the two indicators – share of GDP and share of employment – countries can be given a position on a four-quadrants chart. This analysis makes it possible to follow a country's development over time and to monitor performance trends.



**Chart 1.2 Country Positioning Based on GDP and Employment**



14. The majority of countries are clustered either in the upper right quadrant (Q1: high share of GDP, high share of employment) or in the lower left quadrant (Q3: low share of GDP, low share of employment). The clustering is relative to the average contribution of copyright industries and reveals potentially important patterns in the development of copyright industries over time.

15. National studies suggest that some of the factors which define the position of countries on the chart may be summarized as follows.

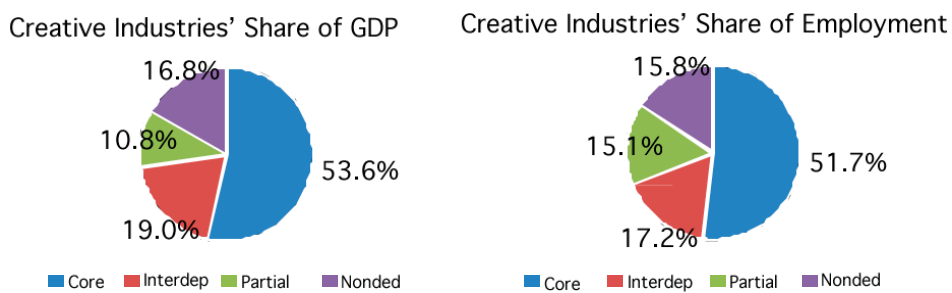
- positioning of copyright industries in domestic and global markets;
- monetary value attached to creative products;
- national policies supporting this sector of the economy; and
- cultural characteristics and national traditions.<sup>7</sup>

Data relationship analysis can establish statistically significant relationships between the contribution of copyright industries to GDP and other available indicators and indices of economic performance. The analysis, which is posted annually on the WIPO website, shows that there is a statistically significant positive relationship between the performance of copyright industries and such indicators and indices as

per capita GDP, global innovation, global competitiveness, intellectual property rights, and economic freedom.<sup>8</sup>

16. The application of the methodology has enabled an in-depth analysis of the contribution of each individual copyright industry. The following chart illustrates the broad distribution of the contribution to GDP and employment of the four main copyright industry groups, as identified in this methodology (see Chapter 4). This kind of analysis provides a snapshot of the actual contribution of each sector. It reveals the performance of specific sectors and can underpin policy action depending on the priorities and intentions of the country conducting the research.

**Chart 1.3 Contribution of Creative Industries to GDP and Employment by groups of industries.**



### 1.3 Institutional Involvement and Implementation Modalities, Practical Arrangements, Research Procedures, and Applications of the Methodology

17. Institutional involvement in national studies ranges from independent academics to research institutes equipped with professional staff, research facilities, and apparatus. WIPO has worked with the governments of member states that wished to undertake studies. The application of the methodology in the countries concerned has been marked by governmental commitment and support but has remained academic in nature to ensure its impartiality and credibility. In some cases, though, studies have been commissioned and supported by industry associations.

18. The studies attract significant interest and support from executive and academic institutions and from copyright institutions representing copyright industries. The



increasing interest of government institutions speaks to a heightened awareness among policymakers of the role of copyright in social and economic development.

19. Throughout the application of the methodology, WIPO has ensured the involvement of experts who are thoroughly familiar with it (in most cases, members of the WIPO expert working group which developed the guidelines in 2002). As far as possible, WIPO has provided expertise and advice during the process. National studies have been conducted by national research teams, which have acquired knowledge and developed expertise in the process. Thus the implementation of the *Guide* has performed, to some extent, a capacity-building function. Countries where research has been completed already have the necessary potential to ensure that the research can sustainably produce regular data sets, allowing for close monitoring of developments in the creative sector.

20. National research teams have generally included economists, statisticians, copyright experts, analysts, sociologists, and policy consultants. The scope of the teams has depended on the specific tasks of each research project, the funding available, and the expertise available in the country.

21. The results of the studies have been widely quoted and used in national policymaking (Jamaica, Croatia, Kenya, Malaysia, Colombia, and Trinidad and Tobago, among others). In general, the studies have been presented at national launching events, triggering debates on copyright and the potential of national creative sectors. A major function of these launching events has been raising awareness among policymakers, industries, creators, and society in general. National commitment has, however, varied in form, including: launching events and publications, national debates, requests for additional surveys in specific priority areas based on the evidence collected, and, indeed, the use of the studies to elaborate on policies for national creative industries or intellectual property.

22. WIPO has published the studies in its creative industries series.<sup>9</sup> So far, studies have been made available to and been accessed by visitors. In a number of cases, studies have also been published nationally in separate publications. Furthermore, all studies have been made available in the national languages of the countries concerned. These initiatives have contributed to spreading awareness of copyright to local communities and in general to making the results of the work known to other countries, triggering subsequent interest and demand.

## 1.4 Scope and Funding

23. In most cases, international comparison has been an important goal, especially with the increase in the number of studies. Many of the studies included substantial comparisons with and even overviews of other countries' studies in order to broaden the perspective of the national audience. The nature of the methodology suggests that the scope of the national studies may differ with the varying scope and coverage of national copyright laws, which are the basis for defining national creative industries. This difference in coverage has been proven to have minimal impacts, and does not affect international comparisons. However, studies have differed to some extent with regard to the accuracy of their statistical information and its availability and relevance.

24. The structure of the national studies has remained similar over the years. However, variations can be observed in the scope of the sectoral analysis of the specific copyright industries, the type and nature of recommendations made, and the depth of the economic and statistical analysis provided. National teams have been able to learn from the experiences of previous studies, and the network of experts who can be consulted on these matters has significantly grown over the years.

25. The body of research has effectively created a database of valuable information which is updated, analyzed annually, and published by WIPO.<sup>10</sup>

26. Studies have been funded from different sources. In the main, funding has come from national governments, while WIPO has also supported research within its program and budget resources. Particular thanks are due to governments which have made specific funds available to WIPO to enable such research through funds in trust (USA, Finland, Japan and the Republic of Korea) or through targeted funding (the Netherlands and Finland). Copyright industry associations and organizations have also contributed to specific studies on a national scale or even in other countries (IIPA in the USA, Buma/Stemra in the Netherlands, the Finnish Copyright Society, and others). Without this support, these studies would not have been possible.

## CHAPTER 2

### BASIC LEGAL NOTIONS

27. The international copyright system provides a broad variety of rights. A survey of the copyright industries implies a study of the economic activities related to the exercise of these specific rights. National legislation may provide protection for the same activity under different laws, which could be more specific or may simply provide different perspectives on the activity. For example, design can be protected as artistic expression under the general principles of copyright, but some countries may have specific laws on design, with particular provisions. For example, Australia has a Designs Act (2003), while the Bahamas has a general Industrial Property Act (2004).

28. National systems may differ in the scope of protection they offer. The experience gained in applying the methodology suggests that differences in the scope of protection are such that they do not necessarily affect the comparability of results among countries. This is because the nature of economic activities related to the exercise of rights is somewhat similar across the globe, and in cases where differences in the operation of copyright exist, it is not always possible to differentiate on a statistical level.

29. The description of the legal framework guiding the operation of copyright industries is important to ensure comparability.<sup>11</sup> Experience shows that 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 related rights administered by WIPO. One hundred and sixty-seven countries are bound by the legal provisions and rights recognized by the Berne Convention for the Protection of Literary and Artistic Works (Berne Convention), the foundation of the international copyright legal system.<sup>12</sup> 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).

30. In order to embark on research concerning the copyright industries, a research team needs to clarify the legal context in which a study is to be carried out. The

copyright concept deals with proprietary rights, and the protection of these rights constitutes the essential basis for building entire industries and related activities. Copyright protection has been indispensable to the establishment and development of copyright industries over time. Copyright industries function differently from traditional industries. Value is created in different and distinct processes and is often embedded in intangible products, and therefore traditional concepts cannot always be directly applied. Understanding the basic legal notions of copyright protection helps to build better assumptions about which economic activities should be studied and surveyed. A copyright approach provides the appropriate conceptual framework for identifying the subject matter to be studied and for collecting and analyzing statistics.

## 2.1 The Concept of Copyright

31. The concept of copyright and related rights is defined in national legislation. In most countries, the basic concepts are consistent with the provisions of the aforementioned WIPO-administered treaties, namely the Berne Convention, the WCT, the WPPT, and the Rome Convention, together with the Agreement on Trade-Related Aspects of Intellectual Property Rights (the TRIPS Agreement) and other relevant international conventions.<sup>13</sup>

32. Copyright 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'.<sup>14</sup> For the purposes of copyright protection, 'literary and artistic works' should be understood as including every original work of authorship, irrespective of its literary or artistic merit. The international conventions do not limit the modes or forms of expression which are protected by copyright law. Literary and artistic works include books, music, plays, choreography, photography, films, paintings, sculptures, computer programs, and databases. A non-exhaustive list of the types of work protected under most national copyright laws is reproduced in Table 2.1.

33. Unlike the protection of inventions (covered under patent laws), copyright law protects only the form of expression of ideas, not the ideas themselves. The creativity protected by copyright law is creativity in the choice and arrangement of words, musical notes, colors, shapes, and movements. Copyright law protects the owner of the property rights in literary and artistic works against those who would 'copy' or otherwise use the works in the form originally expressed by the author.<sup>15</sup>



**Table 2.1 Types of Work Protected Under Most National Copyright Laws**

Literary works	Novels, short stories, poems, dramatic works, and any other writings, irrespective of their content (fiction or non-fiction), length, purpose (amusement, education, information, advertisement, propaganda, etc.), form (handwritten, typed, printed; book, pamphlet, single sheets, newspaper, magazine); whether published or unpublished; and in most countries 'oral works', i.e. works not reduced to writing, are also protected by the copyright law; translations, etc.
Musical works	Whether serious or light; songs, choruses, operas, musicals, operettas; if for instruction, whether for one instrument (solos), a few instruments (sonatas, chamber music, etc.), or many (bands, orchestras).
Artistic works	Whether two-dimensional (drawings, paintings, etchings, lithographs, etc.) or three-dimensional (sculptures, architectural works), irrespective of content (representational or abstract) and destination ('pure' art, for advertisement, etc.).
Maps and technical drawings	Cartographic works such as globes and relief models, plans, blueprints, diagrams, electrical and mechanical drawings.
Photographic works	Irrespective of the subject matter (portraits, landscapes, current events, etc.) and the purpose for which they are made.
Motion pictures or cinematographic works	Whether silent or with a soundtrack, and irrespective of their purpose (theatrical exhibition, television broadcasting, etc.), their genre (film, dramas, documentaries, newsreels, etc.), length, method employed (filming 'live', cartoons, etc.), or technical process used (pictures on transparent film, on electronic videotapes, etc.).
Computer programs and databases	Either as a literary work or as a compilation of data, respectively.

34. Many copyright laws also protect works of 'applied art' (artistic jewelry, lamps, wallpaper, furniture, etc.). In the legislation of some countries, phonograph records, tapes and broadcasts are also considered works.<sup>16</sup>

## 2.2 Exclusive Rights

35. The rights granted by law to the owner of the copyright of a protected work are the exclusive rights to authorize others to use that protected work. Such rights are referred to as economic rights because they allow their owner to derive financial reward from the use of the work by others.<sup>17</sup> Economic rights can be transferred or assigned; this is linked to their function as property rights. The economic functions of copyright law are discussed in more detail in Chapter 3.

36. The main exclusive economic rights accorded to authors (or transferred by them) in the international treaties are as follows.<sup>18</sup>

37. *Right of reproduction*: the right of the owner of copyright to prevent others from making copies of his works. This is the most basic right under copyright and covers all categories of work. This right is applied regardless of the form of the copy (print, digital media, or other). The right to control the act of reproduction is the legal basis

for many forms of exploitation of protected works. The scope of this right varies from one jurisdiction to another. In some cases, it comprises the right of distribution, rental, or adaptation; in others, these are regarded as completely separate rights.

38. *Right of translation*: covers the expression of a work in a language other than that of the original version. In order to reproduce and publish a translation, authorization must be obtained from the owner of the copyright of the original work and the owner of the copyright of the translation or adaptation.

39. *Right of adaptation, arrangement, and other alteration*: 'adaptation' is generally understood to be the modification of a work to create another work, for example, adapting a novel to make a motion picture, or the modification of a work to make it suitable for different conditions of exploitation. An example of the latter instance is the adaptation of an instructional textbook originally prepared for higher education into an instructional textbook intended for students at a lower level. In recent years, the scope of the right of adaptation has been the subject of discussion because of the increased possibilities for adapting and transforming works embodied in digital format. With digital technology, the manipulation of text, sound, and images by the user is quick and easy. Discussions have focused on the appropriate balance between the rights of the author to control the integrity of the work by authorizing modifications and the rights of users to make changes which seem to be part of the normal use of works in digital formats.

40. *Right of public performance*: covers the performance of work at a place where the public can be present, or at a place where a substantial number of persons, outside the normal family circle and its closest social acquaintances, can be present. On this basis, the author or the owner of the copyright may authorize live performances of a work. The right also includes performance by means of recordings; thus, musical works embodied in phonograms are considered 'publicly performed' when phonograms are played over amplification equipment in hotels, discotheques, airplanes, shops, etc.

41. *Right of broadcasting*: covers the transmission by wireless means for public reception of sounds or images and sounds, whether by radio, television, or satellite. This right is sometimes referred to as a special case of communication to the public. When a work is broadcast, a signal distributed by wireless means can be picked up by persons who possess the equipment needed to receive and, if necessary, decode



the signal. In some national legislation, cablecasting is assimilated to broadcasting. Cablecasting is cable transmission which is not a simultaneous, unchanged retransmission of a broadcast.

42. *Right of communication to the public:* embraces a wide scope of activities. Traditionally, it has referred to any operation which renders a work perceptible by the public at a place other than where the communication is made, in particular through cable transmission. Today, this right could also embrace the concept of making works available online and on demand; that is to say, such that individual members of the public may access works from a place and at a time chosen by them. The relevance of this right is therefore evident for transmissions on digital networks. At a national level, the right of communication is sometimes defined very broadly and may also cover public performance and broadcasting.

43. *Right of distribution:* covers the distribution of copies of protected works. This right is granted to ensure that the basic right of reproduction is respected and can be applied economically. It is generally reserved for the dissemination of tangible copies of works. It is usually subject to exhaustion upon the first sale or other transfer of ownership of a particular copy, which means that after the copyright owner (or somebody acting under his authorization) has sold or otherwise transferred ownership of a particular copy of a work, the owner of that copy may dispose of it without the copyright owner's further permission; for example, by gifting it or even by reselling it. In this respect, an important aspect of the right is how far the distribution right is exhausted in one country when the author has authorized the sale of the copy in another country (parallel imports). In some jurisdictions, the broad distribution right may cover lending, rental, sale, resale, and even importation. However, this is not the case under the international treaties.

44. *Right of rental:* covers the authorization of the commercial rental of copies. This right is normally restricted to certain categories of works, such as musical works included in phonograms, audio-visual works, and computer programs.<sup>19</sup> This right is justified because the rental of copies could damage the author's potential market. At sufficient scale, rental can mean lost sales or remuneration for the author. Additionally, a single rented copy can be reproduced uncontrollably many times. The latter issue is particularly important with regard to digital technology, which provides easy and inexpensive ways to reproduce and distribute an unlimited number of copies without loss of quality.<sup>20</sup>

## 2.3 Related Rights

45. Related rights provide protection to those who assist intellectual property creators in communicating and disseminating their works to the public.<sup>21</sup> These rights are similar to copyright, but often narrower in scope. The main related rights granted are as follows.

46. The right of performers to authorize the broadcasting and communication to the public of unfixed performances, the fixation of unfixed performances, the reproduction of performances fixed in phonograms, the distribution of performances included in phonograms, the rental to the public of performances included in phonograms, the availability of their performances fixed in phonograms, and a right of equitable remuneration for broadcasting and communication to the public of performances included in commercially published phonograms.

47. The right of phonogram producers to authorize the reproduction of their phonograms, the distribution of their phonograms, the rental of phonograms, and the availability of phonograms, as well as the right to equitable remuneration for the broadcasting and communication to the public of commercially published phonograms.

48. The right of broadcasting organizations to authorize and prohibit the rebroadcasting, fixation, or reproduction of their broadcasts. In some countries, additional protection is also granted to broadcasting organizations enabling them to distribute on or from their territory any program-carrying signal emitted to or passing through a satellite by a distributor for whom the signal is not intended.

## 2.4 Limitations to Rights

49. There are certain conditions and limitations to the rights described above. The first is the exclusion from copyright protection of certain categories of works. In some countries, works are excluded from protection if they are not fixed in tangible form; for example, a work of choreography would only be protected once the movements were written down in dance notation or recorded on videotape. Moreover in some (but not all) countries, the texts of laws and judicial and administrative decisions are excluded from copyright protection.

50. The second category of limitations on the rights of authors and other owners of copyright concerns particular acts of exploitation which normally require the authorization of the owner of the rights but which may, in circumstances specified by the law, be done without authorization. There are two basic types of limitation in this category: (1) 'free uses' – exploitation of works without authorization and without an obligation to compensate the owner of the rights for the use; and (2) 'non-voluntary licenses' – exploitation without authorization, but with the obligation to compensate the owner of the rights.

51. Examples of free uses include quoting from a protected work, provided that the source of the quotation, including the name of the author, is mentioned and that the extent of the quotation is compatible with fair practice; the use of works by way of illustration for teaching purposes; and the use of works for the purpose of news reporting. As noted above, numerous laws contain provisions allowing the reproduction of a work exclusively for the personal, private, and non-commercial use of human individuals. However, the ease and quality of individual copying made possible by recent technology has led some countries to narrow the scope of such provisions, including the use of systems which allow certain copying to take place but incorporate a mechanism for payment to the owners of the rights, to ensure their economic interests are not prejudiced as a result of the copying. Most recently, international legislation was enriched with the conclusion of a new treaty in Marrakesh, which introduced limitations and exceptions for visually-impaired persons.<sup>22</sup>

52. In addition to specific free uses enumerated in national laws, the laws of some countries recognize the concept known as 'fair use' or 'fair dealing' which allows the use of works without the authorization of the owner of the rights, taking into account such factors as the nature and purpose of the use, including whether it is for commercial purposes; the nature of the work used; the amount or volume of the work used in relation to the work as a whole; and the likely effect of the use on the potential commercial value of the work.

## **2.5 Legal Framework and Copyright Markets**

53. The various rights described so far provide the legal framework within which economic transactions take place. Usually an economic transaction involves many rights, with values determined by different market factors. The rights may operate

differently in different markets. The following table may be useful in positioning the rights with regard to the scope of the markets in which they operate.

54. It is important to note that in most economic transactions involving creations protected by copyright, the intellectual property itself is not transacted, only the right to have access to the protected work (for example, in the form of use or rental).

**Table 2.2 Copyright and the Scope of Respective Markets**

Right	Scope of the market
Right of reproduction	Reproduction of works in a material or non-material form. This might also cover the adaptation of works.
Right of distribution	Dissemination of physical copies, resale, sale and rental, and even lending of copies of such categories of works as musical works included in phonograms, audio-visual works, and computer programs. This might also cover the importation of copies.
Communication to the public	Relaying of works by any distant communication or interactive communication means. This embraces a broad field of activities, including the relaying of a performance to members of the public outside the place where the performance is made, the transmission by cable, and making available works in digital networks in such a way that members of the public may access them from a place and at a time individually chosen by them.
Public performance	Live performances of works in the presence of the public (including by means of recordings and phonograms).
Broadcasting	Transmission of works through wireless and non-interactive means intended for the reception by the public. This also embraces satellite transmissions intended for reception by the public.

## CHAPTER 3

### ECONOMIC FUNDAMENTALS OF COPYRIGHT

55. In the context of the exploitation of works protected by copyright, copyright reveals its economic functions and how it produces multiple effects on the economy. The aim of this chapter is to introduce the basic concepts of the economics of copyright which are relevant to an economic study. It must be emphasized that this methodology focuses on measuring the size of copyright industries in economic terms. It does not extend to measuring direct impact, nor does it seek to establish causal relationships. Such intentions would require a different methodological approach.<sup>23</sup> Estimating the economic ‘impact’ of copyright seeks to determine how much bigger or smaller the industries would be with or without copyright. This is very difficult to measure. Measuring the industries’ size, as opposed to their incremental size, does not measure impact; therefore, this term could be somewhat misleading and is deliberately avoided.

56. Most decisions on copyright policy are not influenced by economists because of the relative scarcity of economic literature that analyzes the economics of copyright as a whole.<sup>24</sup> Existing work on the economics of copyright follows different approaches and, in most cases, focuses on a specific area of copyright.<sup>25</sup> One of the most important points of departure in surveying the economic contributions of copyright industries is the adoption of certain assumptions. In order to study the quantifiable characteristics of activities protected by copyright, it is necessary to assume that copyright protection has been enforced and that economic activities are in compliance with the law.

57. There is a significant amount of literature on the effects of patents on economic growth; however, similar work on copyright has only begun relatively recently. Measuring the size of copyright industries is a task for applied economists and they concur that a clear conceptual and methodological framework, alongside a sound grasp of legal and economic notions, is necessary.

58. This chapter is intended to describe the complex activities that are based on the exploitation of copyright. These activities deserve adequate consideration in the studies to be undertaken. Estimating value added, employment, and trade in the industries in which copyright plays an important role necessitates dealing with

conceptual as well as practical issues. The focus of this chapter is on the relevant concepts.

### 3.1 Streamlining Terminology

59. The literature on the subject reveals a wide range of terminology, including references to copyright, cultural products, works, copyright industries, creative industries, cultural industries, content industries, and the creative economy. The relationship between these terms is worth clarifying.

60. 'Cultural products' and 'works' are used in the text as synonyms, while the term 'copyright' should be interpreted in the context of the Berne Convention, as discussed in Chapter 2.

61. 'Copyright', 'creative', and 'cultural' industries are often used synonymously in the text and refer to those activities or industries where copyright plays an identifiable role. Nonetheless there are some differences between them. 'Copyright industries' are those which function under the protection of copyright and related rights. The level of dependence on copyright in the different copyright industries, which is discussed in detail in Chapter 4, is the main delimitation criterion which enables a mapping of the copyright industries based on the scope of protection under each country's national law. 'Cultural industries' are those whose products have culturally significant content which is reproduced on an industrial scale. Cultural industries are defined in some of the literature as: '[...] those industries producing and distributing goods or services which at the time they are developed are considered to have a specific attribute, use or purpose which embodies or conveys cultural expressions, irrespective of the commercial value they may have. Besides the traditional arts sectors (performing arts, visual arts, cultural heritage – including the public sector) they include film, DVD and video, television and radio, video games, new media, music, books and press.' This concept is defined in relation to cultural expressions in the context of the 2005 UNESCO Convention on the protection and promotion of the diversity of cultural expressions.<sup>26</sup>

62. The term 'creative industries' normally has a wider meaning and includes, besides the copyright and cultural industries, all cultural or artistic production, whether live or produced as an individual unit. Creative industries are sometimes defined as those industries '[...] which use culture as an input and have a cultural dimension,



although their inputs are mainly functional. They include architecture and design, which integrates creative elements into wider processes, as well as subsectors such as graphic design, fashion design and advertising'.<sup>27</sup> The industries which can be listed under cultural or creative industries often overlap to a large extent. The terms cultural and creative industries are often used together, and indeed the distinction between these two is often very fine. Discussion about the scope of the definition of creative industries is ongoing. There are several approaches to the definition, ranging from a broad approach where creativity is associated with almost every aspect of human activity, to a narrower approach where creative industries are defined through one specific policy area (such as culture or copyright). The search for an optimal definition of creative industries also involves multidisciplinary approaches where creative industries are defined through other organizing principles such as innovation.<sup>28</sup>

63. Cultural economics studies the interaction of cultural and economic value and its effect on the creative industries. It analyzes the significance of cultural goods and services for the development of society and examines their qualities and other characteristics. The latter include related government policies, the cost-benefit expression of underlying interests in copyright, the use of cultural goods by consumers, and the relevance of consumer habits.

64. 'Creative economy' is a term that describes the entire system of relationships in the post-industrial, knowledge-based economy, where creativity plays the role of an essential feature and is a driving factor for competitiveness and economic growth. The UN Creative Economy report coordinated by UNCTAD adopts the following descriptive approach to the creative economy.

65. "The 'creative economy' is an evolving concept based on creative assets which potentially generate economic growth and development."

- It can foster income generation, job creation, and export earnings while promoting social inclusion, cultural diversity, and human development.
- It embraces economic, cultural, and social aspects interacting with technology, intellectual property, and tourism objectives.
- It is a set of knowledge-based economic activities with a development dimension and cross-cutting linkages to the overall economy at macro and micro levels.

- It is a feasible development option calling for innovative, multidisciplinary policy responses and inter-ministerial action.
- At the heart of the creative economy are the creative industries.<sup>29</sup>

### 3.2 Main Economic Characteristics of Copyright

66. In addressing the issue of the economic fundamentals of copyright, it is necessary to bear in mind the following features of copyright.

#### ***Copyright is a property right***

67. The basis for studying the economic contribution of copyright is the recognition that it is a private property right.<sup>30</sup> For the purposes of this study, copyright is analyzed as the property right attributed to a literary or artistic creation. Property rights are defined as 'the ability of individuals to own, buy, sell and use their property in a market economy'.<sup>31</sup> In the case of copyright, this right is particularly important in the sense of the possibility of excluding others from the use of the property. Being a property right, the copyright in a work acquires a value which can be measured. It also enables copyright to be traded and to be a full-fledged component of economic life. As with other property rights, the social acceptance of private property is a prerequisite for the existence though enforcement of copyright and for the activities based on it. It must be noted that copyright is more expensive to enforce than other property rights.

68. As copyright is a category which embraces different sets of private property rights, it can be subdivided and made the object of separate market transactions. Consequently, there is a different degree of access to the underlying copyright in each transaction.<sup>32</sup>

#### ***Copyright is different from the 'means of delivery'***

69. 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 story is protected by copyright, but the story is contained in a book, which is a means of delivery. A song is protected by copyright, but a music CD or file is a means of delivery. The principal difference between a protected work and a means of delivery is that the former has the characteristics of a public good, while the latter is typically a private good.<sup>33</sup> Copyright





itself only refers to the intellectual property aspect and not to the means of delivery. It should be emphasized that the means of delivery acts as an intermediary between the underlying copyright and the market. Hence, activities related to the production of and trade in the means of delivery are closely related to the object of the process. The markets for the means of delivery are usually well defined. However, parallel imports also need to be considered in the context of their impact on the distribution and price of copyright-protected products within a given country.<sup>34</sup>

70. Two additional conceptual differences between goods in the economic sense (means of delivery) and works in the copyright sense should be mentioned here. The first is that, while copyright has a lengthier statutory duration, the goods in which the protected work resides usually reach the end of their life cycle long before copyright has expired. Thus, it has been shown that only 5 per cent of books were still in print when their copyright expired.<sup>35</sup> The second point is that a means of delivery often embodies several works. For instance, in a CD, the composer(s), lyricist(s), performers, and the record company have all created works which carry different rights, and these rights have different values in different markets. This, naturally, creates difficulties in estimating the exact value added by each of the rights involved. The functional relationship between the copyright work (the content) and the means of delivery is one of interdependence: they enhance each other's value and are mutually complementary, and thus should be analyzed together.<sup>36</sup>

### ***Copyright has some 'public good' aspects***

71. Cultural creations have some public-good characteristics – they convey indivisibly spread benefits to the community.<sup>37</sup> The benefits are cultural, social and economic. They create a sense of identity and determine social values. At the same time, works can be used by many people. This process does not affect individual consumption, because no current user possesses less when new users start consuming the work. In addition, it is impossible to exclude free riders, except at a cost. This aspect is in a way manifested in the concept of the exceptions and limitations of copyright, which recognizes the need for a certain portion of copyright to be available at no cost given its public or social importance.<sup>38</sup>

## **3.3 Economic Functions and Consequences of Copyright Law**

72. Copyright law is designed to establish the right balance between different economic effects, investing the necessary time in cultural creations, their proper

distribution, and the protection and enforcement of the rights involved. This balance is manifested through the law's main functions and consequences.

73. First and foremost, copyright law defines, recognizes, and protects the copyright of original works. It outlines the scope of the goods to be marketed and sets out the general rules for their trade. In this way, copyright law becomes a prerequisite for market transactions because it enables trade by providing access to the underlying intellectual property. Without copyright it would be less profitable to trade in cultural creations because they would not have acquired the characteristics of economic goods.<sup>39</sup>

74. Secondly, copyright seeks to balance productive efficiency with distributive efficiency. In order to have economic value, cultural products have to be produced and distributed in a manner which can make their continued production and distribution economically sustainable and hence provide income for their creator.<sup>40</sup>

75. Consequently, copyright helps creators to achieve the market value of their works. Only the market can establish the economic value of the work and give its owners access to the benefits to which they are entitled under the law. The economic value of cultural goods is always closely linked with the underlying value of the intellectual property within them.<sup>41</sup> The extent to which these functions are successfully achieved determines the efficiency of copyright law.

76. Copyright law also has a number of important economic consequences. Copyright protection increases the ability to maximize the market position of the copyright holder (the supplier) in at least two ways. Firstly, it allows him to set the market price at a 'monopoly' level rather than at a competitive level (although the reference here is to a specific type of monopoly),<sup>42</sup> and, secondly, it allows the supplier to price discriminate with regard to the other participants in the market according to different levels of access.

77. Copyright reduces the negative effects of the externality associated with the 'public good' aspect of copyright.<sup>43</sup> This is achieved through the concept of the exceptions and limitations of copyright law. An inevitable downside, linked to the inability to fully control the implementation of copyright, is the existence of black and grey markets for copyright products.



78. In broader terms, copyright law enhances welfare, growth, and development because it encourages creativity and social and technological progress. Additionally, insofar as copyright law enables trade which otherwise would not take place, it improves national and international welfare.

79. Another consequence is that copyright redistributes income and costs between stakeholders such as copyright holders, users, and consumers, because changes in the law affect the level of revenues. Entire new industries, like the software industry, have emerged on the basis of new or updated copyright protection regimes. Such industries have not always been studied in earlier research. Therefore the status of and changes in copyright law need to be fully taken into account when studying the growth of creative industries in a given time frame.

80. A number of conditions need to be met for copyright to perform its proper functions. Among these, particular attention should be paid to appropriate monitoring and control of misuse by consumers and the existence of appropriate copyright valuation, which must balance the true cost of production and efficient protection.

81. In summary, copyright law is designed to allow for the creation of the optimal amount of cultural assets and to allow for the efficient distribution via market transactions of the underlying intellectual property so that it can be consumed by those who most value it. In order for intellectual property to exist and content to be created, creators must be sufficiently compensated or they will find alternative employment. Creation implies an initial fixed cost to the creator (opportunity costs, effort, etc.), and production implies a variable cost whenever the underlying intellectual property is attached to the chosen delivery goods and a unit of the delivery goods is produced and marketed. If intellectual property is not protected, it will be easily reproduced and other delivery media will compete with the original in the market. This would undermine profits and could lead to insufficient compensation for the creator. Under a system of legal protection, the marginal cost of reproduction is increased and the market price does not fall as far as when originals and copies compete. Creators can thus enjoy compensation.<sup>44</sup>

### 3.4 Copyright in the National Economy

#### 3.4.1 Multiple Effects on the Economy

82. The creative process itself represents an economic activity because some 'added value'<sup>45</sup> is created within it. However, the economic effect is not only linked to the production of the work, but also to its distribution and consumption – that is, to its participation in the market process. Effects are produced on the overall economy at different stages: creation, production, distribution, and consumption. It should be noted that these effects vary significantly depending on the different categories of work. For example, with regard to a book and a song, different materials are used, different formats are applied, and different devices are needed to use the work. Different works have different effects, and this guide focuses only on the effects which have a direct economic bearing. The legal protection granted by copyright in a given country is crucial for specifying the categories of works to be included in the study.

83. Measuring the economic contribution of a copyright product implies studying the activities resulting from the multiple effects of copyright on the economy: on creators, rights holders, distributors, users, equipment manufacturers, advertisers, etc. To ensure that the study is as comprehensive as possible, it is necessary to try to incorporate all relevant economic values related to works and other protected subject matter which can be economically justified. A demonstration of the multiple effects of copyright in the creative industries, based on experience in the performing arts, is reproduced in Figure 1 at the end of this chapter.

#### 3.4.2 Economic Organization and the Role of the Government

84. Copyright enables rights holders to control the use of their works, thus allowing them to derive economic benefit from the dissemination of those works. However, merely possessing rights does not ensure economic value; this depends on supply and demand in the market. If the costs associated with dissemination are too high, or demand is too low, copyright has no economic value. Most works have to be combined with some means of delivery provided by the creative industries, and creators must negotiate terms with these industries. The economic



organization of the creative industries (including the type of contractual relationship) plays a considerable role in facilitating the participation of cultural goods in market transactions and affects the ability of creators to earn rewards (royalties, wages, or fees). Governments also have an important role to play. Firstly, they organize and carry out enforcement, which is paramount for the success of the copyright system. Secondly, they regulate the industry through the application of competition law and try to ensure that creators obtain a fair division of revenues through copyright. This type of regulation also extends to copyright collecting societies, which in many countries are granted a *de facto* monopoly by national governments, who may also control or supervise them. Copyright collecting societies license works, for which they have received the rights from the rights holders, for specific purposes: (1) they monitor use and collect revenues associated with such use; and (2) they distribute revenue as royalties to the right holders they represent. The relationship between creators and copyright societies is based on the existence of high transaction costs in the management of copyright, the comparative advantages deriving from specialization and the benefits of collective action.<sup>46</sup>

### 3.5 Main Characteristics of the Creative Market

85. Creative markets are highly diversified, which leads to substantial differences within the various industries and kinds of copyright activity under review. The different industries have different media for distribution, rely on different technologies, require different materials, and, in general, need different levels of investment. They often target different audiences and base their activities on different rights or sets of rights. As described above, practical transactions may involve many rights. An important aspect of the creative market is the funding involved. The media industries, which reach a broad audience, demand greater investment than the performing arts. The levels of funding also influence the dynamics in the various copyright industries. Copyright represents a different cost for companies across sectors. It is crucial for the study to consider this variability, so as to afford an understanding of where, in terms of importance, copyright costs fit into these industries and the activities involved. A survey of the economic contribution of the copyright industries can benefit from a short description of the specifics of and main trends in the industries and activities under review.

### 3.5.1 The Demand Side

86. There is no comprehensive study which gives an overall picture of demand in all of the cultural industries. Studies of consumption patterns have been carried out for specific industries or groups of industries.

87. Studies of performing arts have largely concluded that demand is price-inelastic and income-elastic. Studies of the demand for record and film titles show that while demand is relatively stable across motion pictures, it is highly unpredictable for individual titles.<sup>47</sup> The quality of the product and the information available about it are important sources of consumer uncertainty. There is a marked tendency for demand to focus on 'superstars', a situation which has been explained as a tendency among consumers to economize on search and information costs.

88. It is also possible to distinguish between direct demand – that is when the work can be consumed in the form it has been created – and indirect demand – when the consumer uses the work in a more complicated form, including in a modified form.<sup>48</sup> This is closely linked to the existence of two types of creative market operating side by side: the primary and the secondary markets. The primary market represents sales of what are apparently consumer goods, such as CDs. The secondary market is for the use of these goods in other settings: the public performance of sound recordings and films and the photocopying of printed material, images, and suchlike. While primary sales of some items are falling, revenues are increasing for secondary use.<sup>49</sup>

89. Demand is negatively influenced by copyright piracy, which often results in local artists abstaining from putting out their work for fear that it will immediately be pirated and that their economic rights will be violated. This effect can be seen through a tendency to focus on well-established names, a strategy which involves minimizing the risks of investing in new creative content. Local demand is in direct interplay with global demand for creative products. In the global marketplace, trends in industries such as music are immediately reflected in local markets.

90. In the digital context, some of the typical characteristics of demand are changing. For example, the level of interaction between suppliers and consumers is almost immediate: consumers react to the product, and the subsequent demand is more predictable than before. Studies of demand patterns in digital networks seem to suggest that demand is less influenced by quality than previously thought. Quality



is a subjective category, which implies that it is not possible to pass judgment on what represents high quality. In fact, demand for creative products is often influenced by targeted advertising, fashion, formats, other bundled products or services, etc. Finally, the possibility of consumers (referred to as prosumers) also being producers influences demand. In a digital context, demand is therefore shaped by players different to those who influence the analogue world.

### 3.5.2 The Supply Side

91. Features common to all information industries are high set-up costs for content and low or negligible delivery costs.<sup>50</sup> These are the classic economic characteristics of economies of scope, enabling domination and concentration in some markets by a limited number of companies.<sup>51</sup> At the same time, it is worth noting the tolerance for small, independent companies in these industries. They are necessary to the large companies as a source of artistic research and development, R&D (in the music business this is known as A&R – artists and repertoire), because large organizations have greater difficulty spotting talent at an early stage.

92. Another feature of creative industries is the incessant search for novelty, which makes such industries risky. However, there is an inherent asymmetry between creators and companies in this respect. Companies can pool risk by holding a portfolio of copyright assets of different ages and risk; they also have access to capital markets. Individual creators rarely have these advantages.

93. A third aspect of creative industries is that risk-bearing is shared between individual creators and companies; the creator typically bears the fixed costs of creating the primary content (writing the book or music, acquiring the necessary human capital, etc.).<sup>52</sup> However, although the fixed cost of creation is relatively high, it is difficult for the vast majority of artists to earn an adequate income. Artists' labor markets are characterized by short-term employment and oversupply.

94. Finally, when analyzing creative supply, it is always necessary to keep in mind that creative products are differentiated products. These products are not substitutes, because creativity is linked to experience and a preference for a specific creative product which cannot be directly substituted by another creative product. This feature

makes the creative sector much more specific in terms of product features than other sectors of the economy.

### 3.5.3 The Labor Markets

95. Creative industries depend heavily on creative inputs. In creative industries, creativity plays the role of innovation in other sectors of the economy. Just as companies in manufacturing have outlays on R&D, so companies in creative industries search for new ideas and talented workers to supply them. And, as with innovation elsewhere, it is possible to distinguish between product and process innovation. New products are very important in the cultural industries and novelty is in strong demand. It is misleading, however, to focus only on product innovation, because there has been enormous process innovation in the creative industries as well. Technical developments such as sound recording, film, video, television, and now the Internet and digitalization have had a considerable impact on artists' labor markets. As with all technological revolutions, these changes have altered the pattern of demand for workers, reducing employment in the cultural sector for some types of artist and increasing it for others. These developments also have implications for the location of the industries and therefore the location of employment.

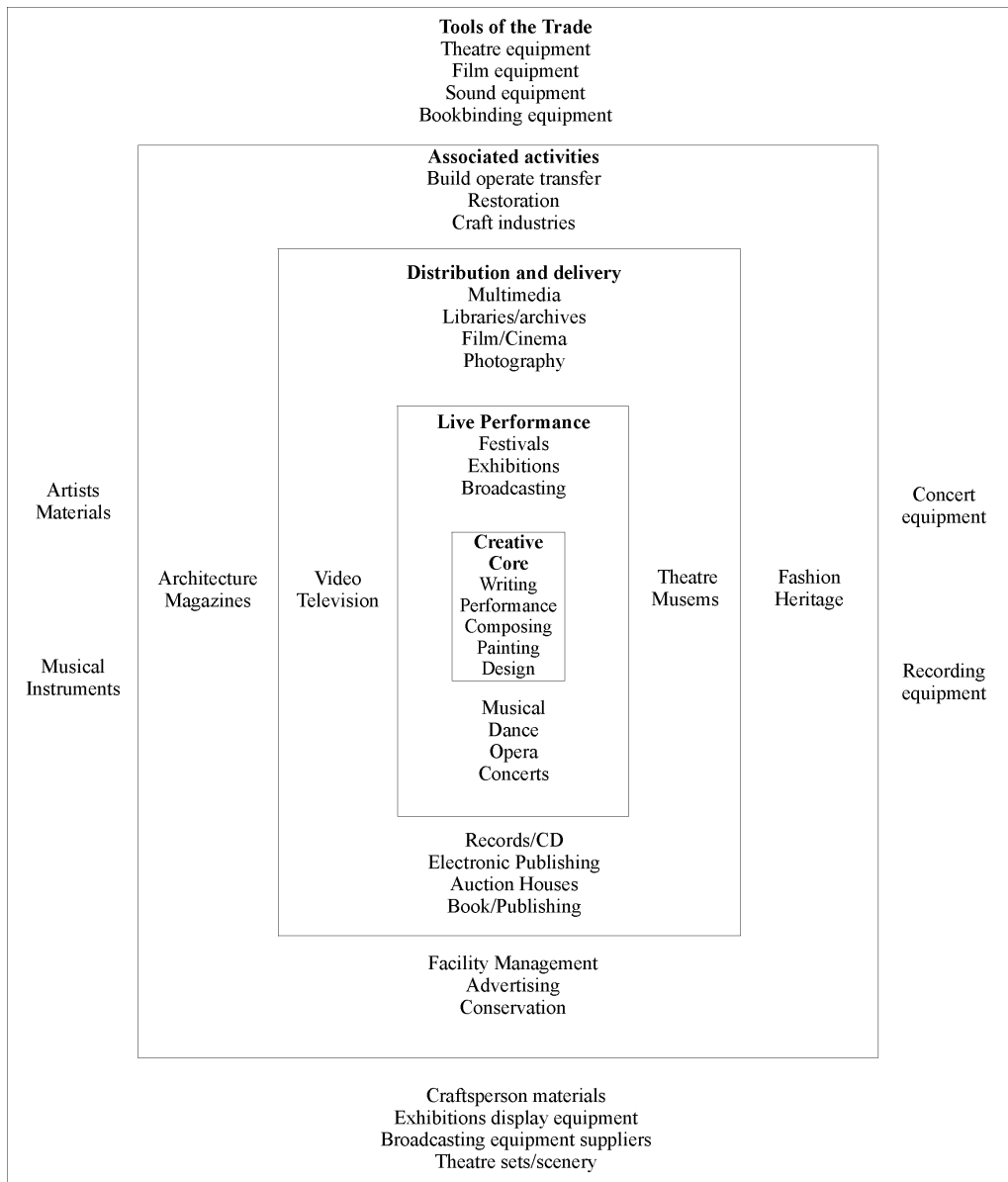
96. Existing research allows some generalizations about the behavior and experience of artists' labor markets.<sup>53</sup> The distribution of artists' incomes is highly skewed, with a few superstars achieving high incomes from fees, sales, and royalties. Research in a number of countries has shown that the 'typical' (i.e. non-star) artist is a multiple jobholder, working longer than average hours in arts and non-arts, working on short-term contracts with no career structure, and earning a variable and lower-than-average income despite being highly educated. With respect to supply behavior, artists respond to increases in income from both arts and non-arts work by spending more time on their chosen art form.

97. One of the universal findings of research on artists' labor markets is that artists' bargaining power is considerably weakened by the persistence of an excess supply of creative workers to the creative industries. As with artists' earnings from other arts sources, the individual distribution of copyright earnings is highly skewed with a few top stars earning considerable sums but the medium or 'typical' author (artist, performer, etc.) earning only small amounts from their various rights.





**Figure 3.1 Creative Industries<sup>54</sup>**



## CHAPTER 4

### THE COPYRIGHT INDUSTRIES

#### 4.1 Overview

98. Over the last decade, there have been many proposals for determining the contribution of a wide set of economic activities which are either defined as creative, cultural, or copyright-based. These definitions are mainly instrumental, because the final objectives are to decide which specific industries are to be studied and to group them into appropriate categories. The aim, then, is to map the industries.

99. Within this framework and given the growing interest in the subject, it is difficult to keep track of the proposals made by government agencies in many different countries and those of supranational institutions. At the national level, Scandinavian and Anglo-Saxon countries pioneered these studies in the 1970s and 1980s, relying on a definition which emphasized individual creativity, skill and talent, and the potential for wealth and job creation through the generation and exploitation of intellectual property.<sup>55</sup> Later on, in the 1990s and early twenty-first century, many other countries from continental Europe, Asia, and Latin American undertook their own studies. Some of these studies stressed the social dimension of culture, an idea which includes activities generally related to knowledge, beliefs, arts, morals, laws, customs, and other capabilities and qualities acquired by individuals as members of society. This approach offered a different foundation for the economic dimension of culture based on growth, development, and the pecuniary motives behind creative activities.<sup>56</sup>

100. It is in the twenty-first century that efforts have been made at the supranational level to devise and agree on a methodology which would allow for consistent international comparisons. The first version of this *Guide* led the way in 2003, followed by specialized agencies and bodies both within the UN system (such as UNESCO, UNCTAD)<sup>57</sup> and outside it (EU, OAS). Depending on their particular scope, each one of these bodies stresses a certain perspective of creative economic activities. Statistics often drive these perspectives because they allow creative activities to be identified and measured.

101. The current version of the *Guide* strengthens its consistency with the principles and conceptual approaches of the System for National Accounting (SNA), which

provides comprehensive, integrated, and internationally agreed recommendations for the measurement and analysis of economic activity. The SNA has developed and promoted the use of a series of classification systems, including the ISIC Rev.4 for the analysis of economic activity, the CPC2 for the classification of commodities, and several functional classifications for the transactions of consumers, government, and non-profit institutions.

102. The basis of these classifications varies and includes the following:

1. the process and technology of production;
2. the characteristics of the outputs;
3. the inputs;
4. the use of outputs; and
5. the function or purpose of transactions.

The desired objective is the aggregation of the statistics into homogeneous units, which would allow for their consistent application over time. Invariably, a combination of criteria may be applied to assist in classification where strict homogeneity is not present. The available criteria may be applied according to a pre-determined hierarchy.

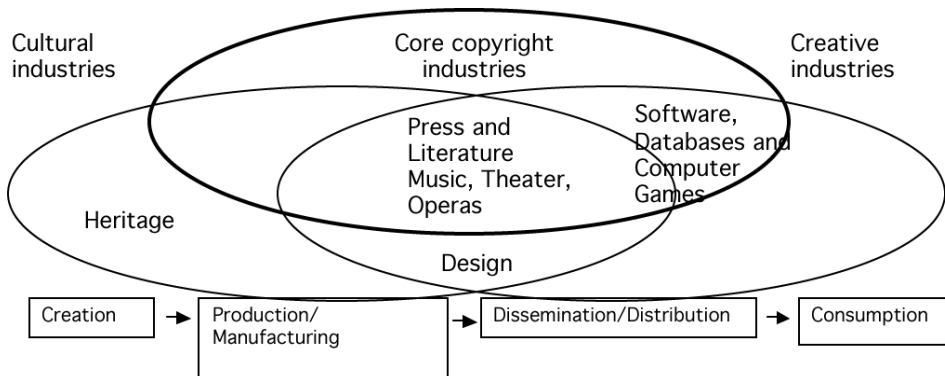
103. WIPO categorization, though influenced by the evolution of measurement practices, has recognized the efficiency of the SNA approach. The WIPO classification system emphasizes the characteristics of outputs in defining its core copyright industries; the characteristics and use of outputs in defining its interdependent activities; and the purpose of the transactions in defining its non-dedicated activities. The organization of copyright industries into such groupings for the purpose of statistical measurement allows for the creative application of classification guidelines by country practitioners while maintaining consistency with WIPO recommendations. A dedicated exercise in aligning WIPO groupings with ISIC classifications can assist in the development of a clear and consistent classification system for uniform international application and highlight issues and cases that require special consideration and treatment by the copyright classification custodian. This contributes to the further development of the methodology.

104. Whatever the conceptual approach chosen to provide a firm basis for a definition of the creative industries, from a practical perspective it all comes down to the inclusion of a comprehensive set of activities and their categorization into particular industries and classifications according to their position-functionality in the

production and value chain. Many creative activities certainly have different natures, yet they serve an economic purpose once their industrial nature is acknowledged. In particular, they yield profits from the creative skills of their workforce and the economic exploitation of copyright and related rights.

105. The alternative notions of creativity and the functions which are normally ascribed to economic activities are shown in Chart 4.1. The chart summarizes the most relevant mapping proposals and how they result in a large intersection of activities that are normally accounted for in methodologies and studies. The activities presented refer to the specific core copyright industries in this *Guide*, where consensus is larger; some of the activities listed in the cultural and creative sectors are incorporated in secondary categories (such as museums and architecture, which are included in the category of partial copyright industries, while design is incorporated in textiles, crafts, and the like). It is clear that from a practical perspective, almost all the 'core' categories are shared between the existing approaches. The mapping proposed in this *Guide* is inclusive because a large set of activities is accounted for either fully or partially depending on their estimated copyright content.

**Chart 4.1 Actual mapping of the Core Copyright (WIPO), Cultural (UNESCO, 2009)<sup>58</sup> and Creative (DCMS, 2011) Industries<sup>59</sup>**



106. As an example of the compatibility between approaches to the core activities, the differences between the specific industry classes included in the 2009 UNESCO Framework for Cultural Statistics (FCS)<sup>60</sup> and the present guide are minimal. The breadth of culturally productive industries shown in Chart 4.1 comprises what UNESCO identifies as 'the minimum set of core cultural domains for which UNESCO would encourage countries to collect comparative data'.<sup>61</sup> Looking at the specific



ISIC Rev.4 industry codes at the core level, only four are not shared by the two frameworks: 9102, museum activities and preservation of historical sites and buildings (included in WIPO's group of partial copyright industries); 9103, botanical and zoological gardens and nature reserve activities; 4774, retail sale of second-hand goods, included in UNESCO's cultural and natural heritage category; and 7220, research and experimental development on social sciences and humanities, included in the visual arts and crafts category. Similar exercises can be made for other mapping proposals identifying a 'core' subset of activities, and finding little disparity.

107. Once the large degree of commonality across the existing approaches has been identified for core activities, extending to include other initiatives or frameworks undertaken by individual countries or supranational organizations, it is also important to highlight the larger variation for activities such as software, interactive media, cultural events, intangible and natural cultural heritage, and leisure activities such as gambling, sport, and tourism. As previously stated, this variation responds to the specific framework of the studies, which places an emphasis on culture, creativity, and intellectual property.

108. The notion of 'industries' in these mapping exercises refers to clusters of activities which can be identified and are statistically measurable, as well as 'activities' which have a certain scale and structure.<sup>62</sup> Activities are normally classified according to their function in the production and consumption processes. Chart 4.1 shows these functions in sequential stages: creation, production and manufacturing, dissemination and distribution, and consumption. Within this framework, the SNA criteria previously presented provide the basis for classifying copyright activities into the four categories adopted in the *Guide*: core, interdependent, partial, and non-dedicated.

109. The initial meeting of the first Working Group of Experts in July 2002 in Helsinki agreed on a categorization of the copyright industries into four main groups. These are the core copyright industries, the interdependent copyright industries, the partial copyright industries, and the non-dedicated support industries. This classification combines 'industries' with 'activities' in a methodological approach which may differ from national accounting systems. The methodological novelty introduced in this *Guide* is that, for core copyright classification, it incorporates both industries and processes as a single list of activities, ranging from creation to distribution and including production, manufacturing, etc.

110. This approach, recommended in the first version of the *Guide*, has proved very successful over the past decade. As a result, the basic structure has remained uncontroversial when tested in the country studies supported by WIPO since 2003, as reviewed in Chapter 1. This was also generally acknowledged by the second Working Group of Experts at the meeting held in Singapore in October 2008, where the methodology was endorsed.

111. The initial inclusion of activities in each classification of copyright industries required the above justification in 2003. After a decade of experience, the different industry groups and categories remain basically the same, even if the particular codes of activity have changed as a result of the fourth revision of the international standard industry classification in 2008, ISIC Rev.4. This new revision offers both new and greater detail in several sections, divisions, groups, and classes. For instance, the new Section J on Information and Communication includes division J 58, Publishing, and division J 59, Motion Picture, Video, and TV. Also, division G 47, Retail Sale, now explicitly includes many copyrighted products (audio, video, books, music, sale of books, etc.). This means that further detail of the copyright industries is now available when collecting and grouping data according to the new classifications.

112. Moreover, the inclusion of specific activities within industries has led to a conservative and cautious approach. To ensure both spatial and temporal consistency in the comparison of studies at the country level and between countries, this new version does not favor enlarging the already detailed list of industries within which the four categories were initially created. Nevertheless, as the studies were undertaken, it became clear that some industries, architecture and interior design for instance, whose copyright contents can normally be assessed by resorting to industry associations (for example, in architecture the stages of blueprint planning and design normally represent a sizeable percentage of the overall budget of the project construction) could be brought from the group of interdependent industries into the core group (see Chart 4.1, where architecture and design are initially excluded from the core copyright industries).

113. Some degree of flexibility is both necessary and desirable because the classification and list of industries in each category may further evolve. In each particular study, the country's team can make classification decisions depending on the available information. This approach does not change the overall contribution of copyright industries to gross domestic product and national employment: it simply



changes distribution within the four industry categories. If statistical information is available at a very detailed level, fine-tuning regarding the description of activities in particular industry categories can certainly be undertaken within the framework established in this *Guide*, keeping in mind the general recommendations and definitions which follow.

## 4.2 The Core Copyright Industries

### 4.2.1 Functional Distinctions

114. Following the industrial and functional classification of activities depicted in Chart 4.1, it is generally recognized that certain industries are more closely identified with copyright than others. Some industries fundamentally exist in order to produce copyright materials<sup>63</sup> for ultimate consumption in the local, national, and global economies. Other industries exist primarily to distribute copyright materials to businesses, consumers, or both. Finally, certain industries exist which both produce and distribute copyright materials. Since the first meeting of the Working Group of Experts in July 2002 in Helsinki, it has been generally agreed that those industries and activities involving copyrightable goods and services would constitute the so-called 'core' copyright industries.

115. For certain industries, the distinction between the production and distribution of copyright materials may not be meaningful, since it would involve a separation of functions performed and accounted for within one entity. An example is the newspaper industry. A typical newspaper maintains a reporting and editorial staff which 'creates' the actual news; an advertising staff who sell and reprint advertising; production employees who physically print the newspaper; and distribution employees who deliver the newspaper to delivery agents or directly to readers. For newspapers, both the production and distribution functions are generally conducted within the same corporate entity. As a result, any attempt to separate the copyright 'production' function from the copyright 'distribution' function of newspaper publishers would mean disaggregating the accounting data of each company by function and allocating the company's corporate overhead among these two functions. While this kind of accounting analysis is possible, the costs of such an undertaking would outweigh the benefits; therefore such an approach is not recommended.<sup>64</sup>

116. The production and distribution functions are closely linked. Indeed, for many copyright industries, the production and distribution functions may be fundamentally interdependent and inseparable for economic efficiency reasons. This is often the case in the motion-picture industry in developed countries, where motion pictures may be produced and distributed by the same studios. Working with separate production companies, the studios may both finance and physically create the basic motion picture. Production financing and budgeting may depend directly on the anticipated distribution which the film will achieve in different media (i.e. theatrical, home video, cable television, broadcast television, streaming) and in different geographical markets around the world. For these reasons, the concerns and constraints of the distribution function in film-making may ultimately influence and even limit the production quantity and quality of the films. Production and distribution are thus truly interdependent. Dividing corporate functions cannot really give credible results because the business is organized so as to establish the optimal efficiency of these core activities; it would not be the same if it were organized differently.<sup>65</sup>

117. One last functional distinction in copyright products relates to the fact that new copyright products may, and often do, compete directly with existing copyright products. Thus, a television broadcast station or network may decide to broadcast new or pre-viewed movies or television programs in particular time slots or during particular seasons. This television studio or network may or may not have invested in the production of original programming. Thus, at any given moment, the station or network may be either a producer and distributor of television programs or simply a distributor. That is, it produces and distributes copyrighted material simultaneously. Nevertheless, in any of these instances, the TV network is part of the core copyright industries, whether or not it is a producer or a distributor. Again, this is an example of the fluidity of distinction between a producer and distributor of copyright protected works.

118. In brief, the functional distinction between production and distribution is not recommended here because in many industries corporate organization is such that these functions are interdependent for reasons of economic efficiency, and both functions are performed simultaneously or inseparably.



#### 4.2.2 Statistical Distinctions

119. Statistical distinctions have two aspects: how to classify industries and where to find data on them.

120. Statistical distinctions often tend to follow functional distinctions. Government statistics deliberately do not distinguish between production and distribution functions. The general trend is that form follows function, and government statisticians follow what is proposed by the structures of industrial organizations. At the corporate level, statistics are mostly compiled without distinction between production and distribution. Consequently, the consolidated account statements reflect this, and it is difficult to distinguish between the two functions in statistical terms. If this is the way statistics are being kept and reported, there is no argument for reorganizing, disaggregating, or separating them.

121. Regarding the first aspect, namely how to classify industries, government statistical departments traditionally do so according to the products and/or services which the industries produce and/or sell. For this reason, the selection of the standard industrial classifications which best capture the 'core' copyright industries generally begins with a list of the products which most depend on copyright protection.

122. In most of the existing studies, which adopt a creative, copyright, or cultural approach, the core industries are similarly identified because they are all based entirely on material normally protected by copyright.

123. On the basis of the comparison between the various studies and approaches shown in Chart 4.1 and the experience accumulated over the last decade in the country reports commissioned by WIPO under the 2003 guidelines, the following nine groups, according to product or service, of core copyright industries are recommended for inclusion in any survey:

- a) press and literature;
- b) music, theatrical productions, operas;
- c) motion picture and video;
- d) radio and television;
- e) photography;
- f) software, databases, and computer games;
- g) visual and graphic arts;

- h) advertising services; and
- i) copyright collective management societies.

124. Significantly, these industries do not include a sizeable number of other industries whose output depends only in part on copyright protection (for example, see the above qualification for architecture and design). They also exclude estimates of the portion of a nation's infrastructure – including its general wholesale and retail industries, transportation industries, and general information and communication technologies – whose output is based in part on the distribution of copyright-protected goods. Finally, the core industries have typically excluded certain publications and research materials which are generated only at educational institutions.<sup>66</sup>

125. The national industrial classification systems and the SNA are perhaps the best sources of statistics of copyright industries. The issue of appropriate statistics is further explored in Chapter 6 and a comprehensive list of the core copyright activities is presented in Annexes II and IV. This pre-sets the specific industry classes included in each core industry previously listed. The organization of national statistics has had a major impact on the existing studies.

126. Statistical systems do not remain static; they change, and sometimes do so in dramatic ways. A good example is the update of the international standard industry classification from the 2002 ISIC Rev.3.1 to the 2008 ISIC Rev.4, which is mirrored and enhanced to five digits by the EU's NACE 2 classification. This constituted a major revision, since all the codes and their descriptions changed (as can be seen by comparing Annexes II.a and II.b corresponding to ISIC Rev.4 in ISIC Rev.3.1, respectively). So, when identifying the equivalents to ISIC Rev.3.1 in ISIC Rev.4, it was necessary to select those which were closest in content by looking at the detailed descriptions and explanatory notes provided in the baseline document.<sup>67</sup> The fast pace of change in statistical classifications is also manifested in the North American Industry Classification System (NAICS). The 2014 Report on the Copyright Industries in the US Economy<sup>68</sup> (since 2004, the reports have followed the methodology set out in the first edition of this guide) fully adopts the 2007 version of the NAICS across its entire statistical base. The new 2012 NAICS maintains the grouping of industries on the basis of similar production processes, including the information sector, which comprises four sub-sectors:

1. publishing industries;
2. motion picture and sound recording industries;

3. broadcasting and telecommunications; and
4. information and data processing services.

However, even if NAICS offers the closest classification to the core copyright industries as mapped in Chart 4.1, it includes certain industries, such as wired and wireless telecommunications, which have never been included in this classification; consequently further work is needed to produce a real estimate of the economic value of these industries. In summary, the reclassification of industries is a fact which needs to be borne in mind because it may affect the studies and is particularly likely to affect their comparability over time for the same country and between countries when different regional industry classifications apply (such as ISIC at a global level, NACE in EU countries, and NAICS in North American countries).

#### 4.2.3 Definition and Breakdown of the Core Copyright Industries

*127. The core copyright industries are industries which are wholly engaged in the creation, production and manufacture, performance, broadcasting, communication and exhibition, or distribution and sale of works and other protected subject matter.*

128. A number of points should be mentioned in relation to this definition. Following the flow depicted in Chart 4.1, the definition reflects and embeds the functional complexity of copyright goods and services: (a) creation; (b) production and manufacture (i.e. producing); and (c) distribution, sales, and services (distribution or tangible dissemination) and performance, broadcasting, communication, and exhibition (intangible forms of distribution or dissemination).

- a) All three of the above-mentioned functions cover individuals and companies whose activities are entirely related to works and other subject matter that has copyright protection.
- b) The core copyright industries as a category could not exist, or would be significantly different, without copyright in works or other subject matter. Therefore, for the industries in this category, 100 per cent of the value added is considered to be the contribution of copyright to the national economy.

- c) Only that part of the creation, production, and distribution industries which is entirely dedicated to copyrightable materials is included in the core copyright industries.

129. A breakdown of the various activities which can be included under the nine subgroups mentioned under paragraph 123 above follows here. On the basis of this list and the national classification system, appropriate adjustments could be made when undertaking a national survey; that is, certain activities may not be present in a country's classification or may have different names, and national legislation may not afford protection to certain categories of activity, which should consequently be excluded. It is considered that no further distinction can be drawn between the various items on the basis of a purely statistical approach.

- a) Press and literature
- authors, writers, translators;<sup>69</sup>
  - newspapers; news and feature agencies;
  - magazines and periodicals;
  - book publishing;
  - cards<sup>70</sup> and maps;
  - directories and other published materials;
  - pre-press, printing, and post-press of books, magazines, newspapers, advertising materials;
  - wholesale and retail of press and literature (bookstores, news-stands);<sup>71</sup> and
  - libraries.<sup>72</sup>
- b) Music, theatrical productions, operas
- composers, lyricists, arrangers, choreographers, directors, performers, and other personnel;
  - printing and publication of music;
  - production and manufacture of recorded music;
  - wholesale and retail of recorded music (sale and rental);
  - artistic and literary creation and interpretation; and
  - performances and allied agencies (booking agencies, ticket agencies).
- c) Motion picture and video
- writers, directors, actors, etc.;
  - motion picture and video production and distribution;
  - motion picture exhibition;<sup>73</sup>

- video rentals and sales,<sup>74</sup> including video on demand; and
  - allied services.<sup>75</sup>
- d) Radio and television
- national radio and television broadcasting companies;
  - other radio and television broadcasters;
  - independent producers;
  - cable television (systems and channels);
  - satellite television; and
  - allied services.<sup>76</sup>
- e) Photography<sup>77</sup>
- studios and commercial photography; and
  - photo agencies and libraries (photo-finishing labs should not be included).
- f) Software, databases and computer games
- programming, development and design;
  - manufacture, wholesale, and retail of pre-packaged software (business programs, video games, educational programs, etc.); and
  - database processing and publishing.<sup>78</sup>
- g) Visual and graphic arts
- artists;
  - art galleries and other wholesale and retail;
  - picture framing and other allied services; and
  - graphic design.
- h) Advertising services
- agencies, buying services (the price of advertising should not be included).
- i) Copyright collective management societies (turnover should not be included).<sup>79</sup>

130. The above categories are those which have to be accounted for in collecting appropriate statistics. As stated earlier, they may be organized differently in national statistics, with different levels of disaggregation. For instance, even though computer games are not independently codified in the ISIC Rev.4, in this new version of the *Guide*, computer games are now explicitly listed as part of core industries and included in the main group of the software and databases industry.<sup>80</sup> However, computer games are independently codified in some classifications, such as NACE 2

(see Annex IV) and NAICS, while they are not yet accounted for in ISIC Rev.4 (Annex II).

131. Consequently, the level of statistical disaggregation is relevant, because the absence of information may result in aggregation biases, and therefore important qualifications are in order. Annexes II and IV present the detailed list of activities included in each industry at the four-digit level. The following situations may arise.

- a) Some industry classes include activities which are not copyright-related and therefore should be excluded from the analysis (this is found even within the core category). For instance, in ISIC Rev.4, industry class '9412. Activities of professional membership organizations' includes associations of specialists engaged in cultural activities such as 'Copyright Collecting Societies', but also medical, legal, and accounting associations. In the annexes, four-digit codes which include both copyright and non-copyright related activities are identified by (m), which stands for 'mixed' codes. In this event, researchers should seek advice from national statistical offices, because more detailed information may be available, even if not publicly. A second option is to collect additional information from complementary industry surveys or censuses, following statistical guidelines. Here, the general underlying SNA framework rule, which states that the allocation of an enterprise or establishment should be done on the grounds of its principal activity,<sup>81</sup> could help to guide the final allocations. In any case, the calculation of a set of 'mixed coefficients' based on criteria combining reliable information and sound assumptions is advisable.
- b) Some industry classes are shared between different core industries and even between different categories or groups of industries. In the annexes, this is indicated by (s) immediately after the specific industry class, thereby denoting that it is a 'shared' code. For instance, ISIC Rev.4 code '5911. Motion picture, video and television program production activities' is shared between 'Motion Picture and Video', and 'Radio and Television'. As in the case of 'mixed coefficients' above, resorting to the statistical office and the complementary information from industry surveys is recommended. For example, other measures that are readily available, such as revenues, could be used as proxies. Additionally, when an industry is shared by two or more copyright industries, a simple criterion is that the shared industry's values be distributed according to the relative size of the copyright industries (without the shared industry). For example, suppose the value-added ratio of 'Motion



Picture and Video’ and ‘Radio and Television’, excluding code 5911, is 4:6, then 40 per cent of this latter code is allocated to ‘Motion Picture and Video’ and 60 per cent to ‘Radio and Television’.

- c) Finally, both situations can occur simultaneously. For the sake of simplicity and to illustrate this complex situation, let us consider ISIC Rev.4 industry class ‘4649. Wholesale of other household goods’. In the absence of a detailed five- or six-digit classification, as is normally the case for statistical classifications in most countries, this category: (1) includes the wholesale of household goods such as appliances (refrigerators, stoves, ovens, etc.) and lighting equipment, which should be left out of the analysis; and (2) is shared by ‘Press and Literature’, ‘Music, Theatrical Production, and Operas’, and ‘Motion Picture and Video’. In this case, the recommended process first establishes the content which should be included in the study by applying ‘mixed coefficients’ and then allocates the resulting copyright value between industries by way of the ‘shared coefficients’. Again, as in the two previous cases, an empirical investigation would be required on a country-by-country basis to establish how to determine the copyright content of an industry class more accurately, and then distribute it across copyright industries. In a sense, local teams should bear in mind the application of the necessary protocols (methodologies and statistical procedures) as a general objective so as to produce eventually the data which would allow the division of industry classes into five-digit levels.

#### 4.2.4 Evolution of the Core Copyright Industries

132. The development of the digital economy has affected the core copyright industries in many significant ways. As society is evolving from analogue to digital technology in a revolutionary process, access to the information and communications sector will define the competitiveness of a national economy. For individuals, there is seamless connectivity almost everywhere. They own personal pocket libraries of music, audio-visual content, and electronic literature on a scale inconceivable at the time of the first version of the *Guide*; inexpensive and increasingly faster broadband allows efficient and user-friendly working patterns in the knowledge sector of the economy. It gives access to an increasing range of social networks, enabling users to create content, exchange it, and share experiences.

133. For some companies, the digital economy has proved a safe haven for business models based on copyright industries. The global crisis in 2008 has thrown into upheaval the ranking, according to market capitalization, of the one hundred largest companies in the world. In the past five years, there has been a change in leadership: the best-known technological brand with the most successful online content store has replaced, for the first time, a petrochemical company. Moreover, in 2013 six of the top ten global brands by value were in the digital sector.<sup>82</sup>

134. However, even if the digital era offers business opportunities, it also poses relevant threats: the transition to digital is overturning old business models much faster than new ones can take their place. Old business models are no longer valid because size no longer matters as much. Incumbent media and entertainment companies maintained unchallenged market power as a result of high fixed costs, such as print plants for newspapers and studios for television. They also benefited from regulatory policies associated with scarce resources such as limited broadcast spectra, which created high barriers to entry. Such power and benefits are being challenged because alternative ways of accessing content are now available.

135. As a result, the content industry faces significant difficulties. Besides the above explanation, there are many views on why the model has broken, but there remains the undisputed fact that a significant proportion of consumers are accessing digital content via unlawful peer-to-peer file-sharing. Regardless of the specific figures,<sup>83</sup> it is clear that creative industries suffer considerable losses from unlawful downloads and streaming. This is also a challenge for governments which must ensure, within an equitable framework, a due reward for creativity in the digital world which meets the interests of creators, aggregators, distributors, and consumers.<sup>84</sup>

136. For governments, the task is to oversee the creation of an effective online download and streaming market of scale, providing content which is affordable and easily and conveniently accessible to consumers.

137. From a statistical perspective, the convergence of services requires more careful consideration of the products which are distributed over the Internet. Even if these new forms of consumer access do not yet qualify as copyright production industries, they clearly seem to have emerged as copyright distribution industries at least in part (hence their inclusion in the category of non-dedicated industries below). Because of the growing demand for data related to information and communication





technologies (ICT) and continuing policy interest in this area worldwide, the new International Standard Industry Classification, ISIC Rev.4, as well as its NACE Rev.2 and NAICS counterparts, now devote a whole section to this sector (Section J). In the 2012 NAICS, it is covered in Sector 51. The section includes the production and distribution of information and cultural products; the provision of the means to transmit or distribute these products, as well as data or communications; information technology activities; and the processing of data and other information service activities. It is divided into six divisions which include copyright industries proper (58, 59, 60, 62 and 63) and those related to telecommunication activities (61) – see Annexes II and III.

138. However, the boundaries between telecommunication, broadcasting, and Internet and IT services are likely to remain unclear for some time because new technological developments are likely to continue. In the previous version of the *Guide*, it was considered that a nations' total creative output would also have to reflect the extent of 'value added' created by websites and other material which is only produced and distributed in digital form on the Internet. This is addressed by the new classifications in 'Division 63 Information Service Activities'. Such digital creative output is now explicitly accounted for as part of the core industries in this new version (see industry class 6312 Web Portals).<sup>85</sup> This is an example of how the creative side of Internet products and services, once qualified and quantified, have come to form part of the core copyright industries.

### **4.3 Interdependent Copyright Industries**

#### **4.3.1 General Considerations**

139. It is impossible to define the industries which do not form part of the core copyright industries without first accurately defining what the core industries are. The definition and identification of 'non-core' industries has been characterized by blurred borders and frequent changes across borders. The term 'interdependent copyright industries' is recommended in preference to 'non-core' to show that the relationship between 'core' and related industries is not passive or based on a one-sided dependence. 'Interdependent' thus gives a better idea of the functional relationship than does the static term of 'non-core'.

140. Another precondition of studying interdependent copyright industries is the existence of a clearly defined industrial code. Only when such a code exists and the production unit is classified can the methodology of national accounting be used to measure the economic contribution of a given industry. The existing statistical classifications (ISIC, NACE, NAICS) are well-suited for measurement purposes within this framework, since they are built on a production-oriented (or supply-based) conceptual approach. Production units are grouped into detailed industries based on similarities of economic activity, taking into account the inputs, the processes and technology of production, the characteristics of the outputs, and the use to which outputs are applied.

141. This framework allows the identification of interdependent copyright industries through the careful tracing of the backward linkages (the relationships between a copyright product and business services, transportation, investment goods, machinery, and the purchase of production factors) and of the forward linkages (wholesalers and other consumer entities). The backward linkages are of particular importance for estimating the indirect economic contribution of a product to the economy. As contracting out non-core business processes to third parties (outsourcing) becomes increasingly popular as a way to avoid certain types of cost, backward linkages gain relevance. The result is that industries appear smaller because administrative, accounting, and management functions are moved to business services. This type of approach is closer to value-chain analysis, but is necessary to understand the specifics of the interdependent copyright industries (and, even more so, the specifics of the partial and non-dedicated copyright industries) and to justify the figures obtained.

142. Often, the conceptual, analytical, and statistical framework adopted for a specific national study is not changed dramatically in subsequent studies. However, new developments, especially in technology (computer programming, multimedia, and the Internet did not appear in studies done over ten years ago) and law must be taken into account in updating the framework. Industries are also dynamically changing, and, depending on the approach, could be placed under different categories. Concepts and analytical approaches must therefore be kept flexible.



143. Establishing the contribution of the interdependent copyright industries effectively requires judging the part of value added which is derived from creative and copyright activities.

144. Results from the existing studies reviewed in Chapter 1 show that the interdependent copyright industries included in Annexes II and III accounted on average for about 19 per cent of the GVA and 17 per cent of the employment of the whole copyright industries (Chart 1.6). These percentages amount to approximately 1 per cent of national GDPs and 0.9 per cent of employment. These are relevant figures, second only to the core activities. For this reason, when undertaking the analysis, it has to be borne in mind that, statistically, the interdependent copyright industries make up a sizeable share of the total copyright industries.

#### 4.3.2 Definition of Interdependent Copyright Industries

*145. 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.*

146. 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 category comprises the manufacture, wholesale, and retail (sales, rental, and leasing) of the following.

- TV sets, radios, CD-DVD-Blu-Ray players, electronic game equipment, and other similar equipment;
- computers and equipment;
- tablets and smartphones; and
- musical instruments.

147. 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. In some studies, they have been referred to as 'copyright-related', 'copyright hardware', etc.

148. Also, the group of interdependent copyright industries covers the manufacture, wholesale, and retail (sales, rental, and leasing) of:

- photographic and cinematographic instruments;
- photocopiers;
- blank recording materials; and
- paper.

While these industries do not exist primarily to perform functions (particularly reproduction) related to copyright works, they significantly contribute to copyright use, predominantly through facilitation equipment.<sup>86</sup> However, they are linked to multi-purpose technological devices which have uses other than for copyright works and other protected subject matter. For the most part, they are consumer durables. The value assigned to them would be based on the judgment of the research team undertaking the analysis and the experience of past studies, resulting in corresponding weights.

#### 4.4 Partial Copyright Industries

*149. 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.*

150. Only that portion which is attributable to works and other protected subject matter should be included. These industries include:

- apparel, textiles, and footwear;<sup>87</sup>
- jewelry and coins;<sup>88</sup>
- other crafts;
- furniture;<sup>89</sup>
- household goods, china, and glass;
- wall coverings and carpets;
- toys and games;
- architecture,<sup>90</sup> engineering,<sup>91</sup> surveying;
- interior design; and
- museums.



151. This list could be lengthened. However, it is recommended that it is not extended further because it is unlikely to show major contributions from other activities. If the list is extended, it is advisable to do so in a specific survey outside the main research.

152. Some partial copyright industries have significant service components which are not necessarily about the production of works protected by copyright and must therefore be separated. In architecture, for example, various studies illustrate that 65 to 75 per cent of the architectural industry has a copyright component, and 25 to 35 per cent consists of related services. A careful and detailed analysis of each particular industry is needed to understand its structure and processes in a given country. Only then can a decision be made about the percentage that can be regarded as being copyright-based. This judgment is important because, once again, under the general SNA rule, a company (enterprise or establishment) is classified as belonging to a certain industry if the largest share of its value added (known as its principal activity) is considered to belong to this industry.

153. From a practical perspective, when undertaking the study it is important to bear in mind that the specific categorization of partial copyright industries refers to a percentage of the industry class which should be accounted for in this category. This percentage, known as the 'copyright factor' in Section 6.5, should not be confused with the particular set of industry classes which include both copyright and non-copyright related activities. These are denoted by (m) – mixed – in Annexes II and IV, and give rise to the 'mixed coefficients' already described.

154. An unusual case in this group of partial copyright industries is the design industry. Artistic design falls within the scope of copyright and the Berne Convention requires that protection be given to works which result from creative efforts irrespective of the form, method, or material used. In this respect, national legislation should determine the extent of the application of the law to works of applied art, industrial designs, and models, as well as the conditions under which such works, designs, and models are to be protected. It should be taken into account that, according to the Berne Convention, works protected in the country of origin solely as designs and models shall be entitled in another country of the Union only to such special protection as is granted in that country to designs and models; however, if no such special protection is granted in that country, such works shall be protected as artistic works.

155. In light of the above, a legal delimitation would have to be made at the initial stage of the survey. The category ‘chair’, for example, may cover chairs protected under industrial design, but it may also include craft-made chairs which might be protected by copyright, that is, as a work of applied art, or unoriginal chairs which are not protected at all. It may also appear under crafts in the statistics. The situation is different from country to country. Germany, for instance, admits the protection of design with quality features under a specific law. These designs must be registered to obtain the protection and copyright only applies when extremely important aesthetic content exists. In contrast, the Italian legal system does not permit cumulative protection under design and copyright laws. Copyright can be invoked only if the artistic elements of the work can be completely dissociated from the functional aspect. In France, double protection is possible: the two protective regimes of copyright and industrial design are not superposed, but added. This implies that the owner of a registered design may also be able to obtain copyright protection.<sup>92</sup> In some countries, the issue of whether artistic design is copyrighted is considered by special bodies.

156. The studies carried out in different countries indicate that partial activities contribute less than the other categories of the copyright industries, generating 8 per cent of the industries’ total value added and 15 per cent of employment. This illustrates a labor-intensive production process, which is particularly relevant from the perspective of job and income generation in developing countries (such as the Philippines, Mexico, and Bhutan, as shown in Chart 1.4).

#### 4.5 Non-dedicated Support Industries

*157. 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.*

158. The non-dedicated support industries include:

- general wholesale and retail;
- general transportation; and
- information and communication (including wired, wireless, satellite, and internet).<sup>93</sup>



159. These industries derive from the backward linkages and generally refer to business services and delivery modes. They measure spillover effects, but are quite far removed from the core copyright industries. The non-dedicated support industries share some functions with other industries, which is why they can be taken into account in a survey only to a certain extent. Here, again, a qualified judgment must be applied when measuring their effect on a national economy. When analyzing the distribution aspect of this group of industries, it is necessary to use estimates of the specific functions they perform.

160. This final set of activities demonstrates a contribution to copyright industries and overall economies which is about the same in terms of GDP (16 per cent) and employment (14 per cent). Clearly, as for interdependent and partial activities, when determining the weight (copyright factor) associated with these industries, it is necessary to combine several approaches and techniques which take into account the structure, organization, and logic of each sector. Normally, interviews and surveys determine the IP content and its importance to everyday operations. This is particularly challenging for non-dedicated industries because they are a heterogeneous group. Finally, the experience of previous studies in countries with similar characteristics is relevant and can be adopted, with the necessary qualifications (see Section 6.5, Imputing Key Components and Estimating Copyright Factors).

161. A summary of the various categories of copyright-based industries and their sub-categories is reproduced in Annex I of this *Guide*. A further step in the analysis is to link these industries with the ISIC codes and to lay out the measurement apparatus. This is done in Chapter 6.

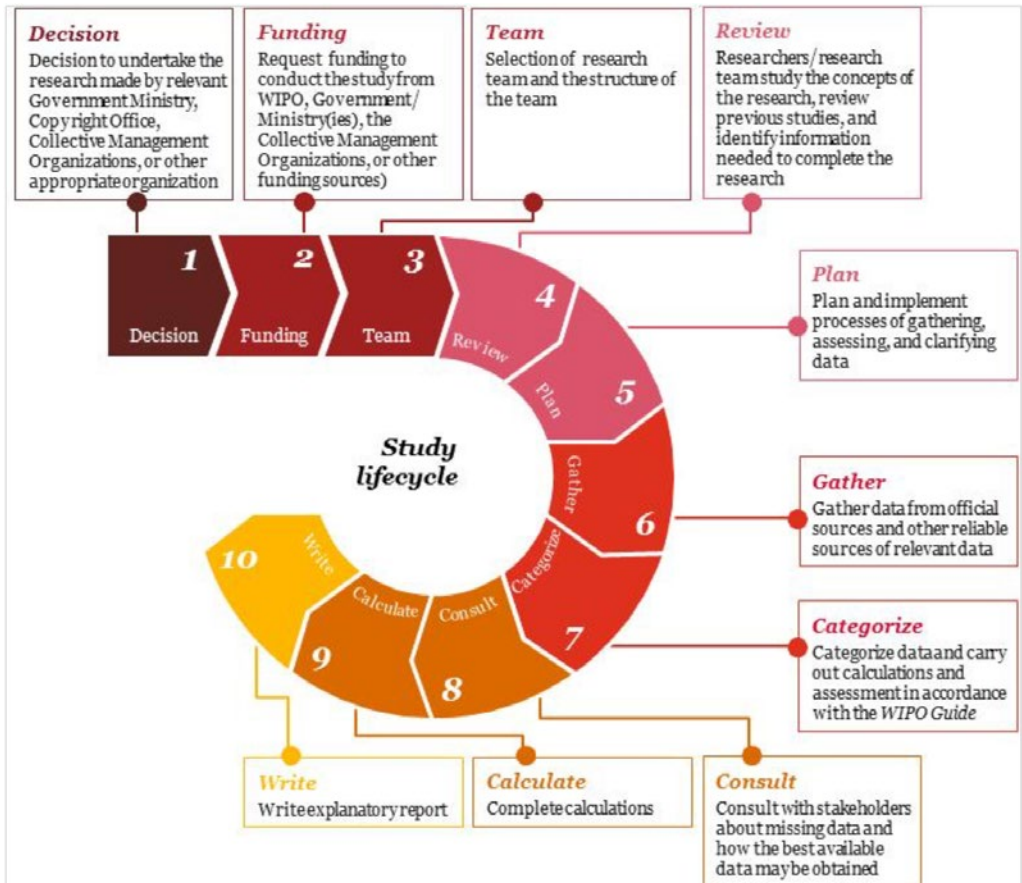
## CHAPTER 5

### FRAMEWORK OF THE STUDY

#### 5.1 Organizing a study

162. Undertaking a study requires commitment and preparation. Commitment from relevant authorities and stakeholders is necessary for funding, but also to obtain expert advice, assistance in gathering data, and the explanations that are necessary to comprehend the results and their implications. This support is also important because it is more likely to produce action based on the results of the research. Preparation is necessary to organize a research team, develop its understanding of the purposes and methods of the research, identify data and data sources needed for the research, and prepare to conduct the study. In organizing, preparing, and conducting a study, the team may be expected to undertake the actions detailed in the following diagram.

**Figure 5.1 Study lifecycle**







163. The process of planning and organization may take up to 3 months, and implementation may take 6-12 months. During the process, it is helpful to consult with others who have previously conducted studies and to review how previous studies have handled challenges in gathering data and calculating contributions.

164. There is no standard structure for conducting the research. It may be conducted by a ministry, a national statistical agency, a copyright organization, a university, or an independent research organization. It may be undertaken by a small research team or a larger working group of specialists, each performing different aspects of the research. The decisions on the location and organization of the research are dependent on the resources available, the expertise of personnel available, the time allotted for the study, and the extent to which statistical data is available to the public.

165. A broad government-based research team might include personnel from the ministry responsible for copyright, the national statistics agency, the labor ministry, and customs authorities, in addition to representatives from the national copyright society. A non-governmental research team might include a lead contracted researcher and his or her research assistants, with a supportive research committee representing relevant government agencies and the national copyright society.

166. Regardless of the organizational aspects of the research, the study should be led by a highly competent researcher skilled in large-scale data gathering and analysis, with significant knowledge of statistical data sources and methods and the ability to complete the research in a timely manner. The lead researcher should preferably be an economist. The research team should include at least a statistician and a copyright expert.

167. Important contacts in carrying out the study will include personnel in:

- the national office of statistics;
- the ministry of labor;
- the customs agency;
- the central bank;
- the copyright society; and
- professional associations in the copyright industry sector.

168. In order to quantify the contribution of copyright industries to an economy, the framework of the studies should include measurements of the percentage of the

gross domestic product (GDP) attributable to them, employment in the copyright industries, and their share in foreign trade. The Gross Value Added (GVA) approach is recommended here as most appropriate for measuring the relative size of these industries in GDP. This computes GDP at basic prices and allows the shares of all the value-added by the sector to sum up to 100 per cent. The analyst might still consider adjustments to the basic price valuations by adding value-added taxes and other taxes on production and by subtracting subsidies.

169. From these basic indicators related to the size of the copyright industries, it is possible to obtain performance indicators which can be compared to those of the aggregate economy by calculating labor productivity ratios and foreign trade balances, and, when information is available over time, by determining the contribution to a country's economic and employment growth.

## 5.2 Guiding Principles

170. It is important to identify clearly the measurements which should be used to determine the economic contribution of the copyright industries. These measurements should be representative, justifiable, and obtainable without major difficulties. The following characteristics of the measurements used are worth highlighting.

- They should be statistical in character and be produced on a regular basis (that is, not only as one-off estimations, but as ongoing statistical processes), combining the compilation of benchmark estimations with more flexible uses of indicators.
- Estimates must be based on reliable statistical sources.
- Data should be comparable over time within the same country, comparable among countries, and comparable with other fields of economic activity, allowing for cross-sectoral and time-series analyses.
- Data should be internally consistent and presented within internationally recognized macroeconomic frameworks.<sup>94</sup>

## 5.3 What to Measure?

171. The studies carried out over the last decade and based on the first edition of the guide show a great deal of consistency about what needs to be studied. They



systematically calculate three main indicators related to size, that is, related to size indicators (S). See the results presented in Chapter 1.12:

- (S.1) contribution of the copyright industries as a percentage of: (a) GDP, and (b) GVA;
- (S.2) contribution of the copyright industries to: (a) employment, and (b) the compensation of employees; and
- (S.3) foreign trade: (a) value of imports and exports, and (b) shares in overall exports and imports.

172. These indicators are mutually complementary and provide a comprehensive horizontal picture of the copyright industries in a given country. The distinction between the concepts of GDP and GVA is relevant as presented in the System of National Accounts (SNA), 2008. As shown below, the preferred methodology for measuring the economic activity of copyright industries relies on the value-added approach. Nevertheless, it is customary to refer contributions to the overall economic activity in terms of GDP, which constitutes the main size indicator along with contribution to employment.

173. The percentage contribution of copyright industries to GDP (GVA), employment (compensation of employees), and trade (shares in exports and imports) is normally compared to those of other sectors of the economy, either traditional (such as agriculture and manufacturing) or relevant in terms of their contribution to the economy (such as service sectors). Over the last decade, it has been found that copyright industries rank above many consolidated economic sectors; this helps policymakers and stakeholders to raise awareness of their potential for wealth and job creation.<sup>95</sup>

174. From the amount of value added, employment, and foreign trade (exports and imports), it is possible to derive a second set of indicators related to the performance, that is, performance indicators (P), of the copyright industries within the economy:

- (P. 1) labor productivity;
- (P.2) contribution to GDP and employment growth; and
- (P.3) foreign trade balance (surplus or deficit, that is, net exports).

175. Labor productivity is defined as the ratio between a volume measure of output (GVA or GDP) and a measure of input use (total employment or the total number of hours worked). This indicator varies greatly between copyright industry categories,

with those related to mass media and entertainment activities presenting higher labor productivity because they are capital-intensive, while artistic creations (visual and graphic arts) and live performances (musical, theatrical, etc.) exhibit the lowest productivity because they are labor-intensive. This indicator, at the aggregate and industrial levels, is normally compared to that of the overall economy and to other economic sectors.<sup>96</sup>

176. In international trade statistics, imports are measured at their CIF (cost, insurance, and freight) value and exports at their FOB (free on board) value. The valuation is done according to IMF (International Monetary Fund) guidelines. For copyright products, the level of detail regarding accounting and classification standards has greatly increased since the first edition of the *Guide*.<sup>97</sup> The balance of payments includes copyright products, particularly goods such as video and audio recordings, and software, but also charges for the use of intellectual property such as fees, commissions, or royalties<sup>98</sup> and, finally, personal, cultural, and recreational services (including audio-visual and related services). The net position for the different industry categories (core and non-core) in terms of their balance (exports less imports) demonstrates their competitiveness in global markets. The balance of the copyright industries is normally compared to that of other relevant economic sectors or that of the overall economy to determine whether it contributes to, or detracts from, the aggregate surplus or deficit position. When bilateral trade data is available, relevant policy guidelines can then be derived so as to promote national copyright products in specific foreign markets.

177. Several countries have systematically studied copyright industries over the years, and it is possible to compare their value added and employment growth rates to those of other sectors and of the economy as a whole. Moreover, it is desirable to use simple techniques to isolate the contribution to the national economy and to employment growth. Normally, copyright industries outpace the rest of the economy, exhibiting more dynamism and generating more wealth and jobs. Consequently, they deserve to be considered on an equal footing with traditional and better-known sectors when designing public policies which solve market failures, such as price-setting through taxes and subsidies. This ensures, among other things, that copyright law is respected on the Internet and that access to credit and skilled labor is facilitated.



178. Additionally, it is recommended that a third category of complementary indicators (C) which stress the importance of copyright industries on the whole economy and shed light on different aspects of their market structure be estimated.

(C.1) At the macroeconomic level, where the statistical information is available, several studies have calculated output, value added, income, and employment **multipliers**, relying on the input-output framework. Multipliers measure the difference between the initial effect of an exogenous change (such as, final demand) and the total effects of a change.

(C.2) At the microeconomic level, key measures for the most important industries describing the **market structure** are product characteristics, concentration indices, average revenues of firms, and workers' salaries (that is, employee compensation over number of employees). Market structure determines the conduct of buyers and sellers, the degree of competition, market power, and barriers to entry, and results in market performance in terms of social welfare.

179. For the above reasons, additional information related to the copyright industries should be collected when available. This allows for indicators which facilitate an extended analysis of the overall impact of copyright industries on the economy, such as taxes paid, revenues, and salaries, to be calculated. These indicators provide information about other complementary and relevant aspects of copyright industries, which in turn helps to improve understanding of the related economic processes.

180. In summary, it is recommended that studies seek to measure at least two sets of indicators: (1) those related to size, as the percentage of GDP, employment, and foreign trade attributable to the copyright industries; and (2) those related to performance in terms of other relevant sectors and the economy as a whole, such as labor productivity, balance of payments net position, and contribution to economic and employment growth. The above list of indicators is not as exhaustive as an analyst of the copyright industries might desire. Nevertheless, it has been deliberately kept at this level because it represents the minimum set of information which should be available regardless of the level of development and comprehensiveness of the statistical system in any country. This ensures the comparability of results both in time and across countries.

## 5.4 Size of the Copyright Industries in the National Economies

181. Chapter 1 summarily reviews the results of the studies undertaken over past years according to the first version of this *Guide*. From the beginning, and up to the most recent studies, research has shown that the size of the copyright industries in terms of their contribution to GDP, employment, and foreign trade has surpassed expectations. The following section comments on the different indicators available to measure the size of copyright industries in an economy.

### 5.4.1 Economic Indicators

182. GDP is a measure of all final output from all productive activities in an economy.<sup>99</sup> There are three alternative but equivalent ways to measure the contribution of the copyright industries to GDP following the methodology set out in the System of National Accounts (2008 SNA).<sup>100</sup>

- a) The value added approach – where GDP (at basic prices) is defined as the difference between output and intermediate consumption; that is, the sum of the value added of all industries, companies, or establishments compared to the value added of the copyright industries. This has become the standard method employed in past surveys for the reasons discussed below.
- b) The expenditure approach – whereby GDP is viewed as the sum of all expenditure categories, personal consumption, gross private domestic investment, government purchases, and net exports, and is compared to the sum of all copyright-related expenditure categories.
- c) The income approach – in this case, GDP is the total of payments to factors of production organized by economic agents (primarily labor and capital) and is compared to the compensation paid to copyright-related labor (i.e. compensation to employees through wages and salaries, bonuses, and other benefits) plus copyright-related profits which accrue to firms.

183. From a national accountancy perspective, the three methods yield the same estimates of GDP. However, when it comes to the specific studies of copyright industries, the size of the copyright industry would inevitably differ if all these



approaches are followed, because reconciling the statistics from different data sources is a complex task which demands very specific information. This must be harmonized in the methodological context of a satellite account framework (see Chapter 5 on the measurement procedure and apparatus). These requirements will normally exceed the data collection and statistical operations of many countries, so, to avoid conflicting results, it is better to rely on the approach which offers more advantages in terms of the availability and reliability of statistics.

184. As a result, measuring the size of the copyright industries through their contribution to value added has been preferred in a majority of the studies. Additional reasons which have been advanced for this method are as follows.

- It is an industry-centered approach which accords with the desire to identify the contribution of the copyright industries.
- It reduces the chances of double counting.
- Value added input-output tables (and the surveys underlying them) are readily available for many countries.

185. For some countries, however, it may be easier to adopt alternative approaches. In this context it should be mentioned that it is generally considered easier to obtain reliable estimates of expenditures than of income components because the former are measured more directly.

#### 5.4.1.1 The Value-Added Approach

##### **A. Some Definitional Issues**

186. As noted above, the term 'value added' is defined as final sales in a given sector less the value of intermediate goods and services purchased to facilitate the production. Some methodological issues need to be clarified here.

- a) In national accounts, market transactions are valued at the actual price agreed upon by the transactors. In the absence of market transactions, valuation is made according to the costs incurred, such as non-market services produced by governments (see Section 6.2 for details). In general, different types of valuations of output may be used according to the choice made between basic prices and producers' prices and, in the latter case, the existence or absence of types of value-added tax. The valuation principles to be employed are as follows: use should be valued at purchasers' prices

(final consumption, intermediate consumption, capital formation); and production should be valued at basic prices.<sup>101</sup>

- b) Value added can be referred to in either gross or net terms: gross value added is the value of output less the value of intermediate consumption; net value added is gross value added less consumption of fixed capital. Since value added is intended to measure the additional value created by a process of production, it ought to be measured net, because the consumption of fixed capital is a cost of production. However, the consumption of fixed capital can be difficult to measure in practice, and it may not always be possible to make a satisfactory estimate of its value and hence of net value added. The present guidelines adopt the gross measurement of value added.
- c) When measuring the value added of the economy, value-added statistics should normally capture the following:
  - i. The non-observed economy (NOE), including informal 'hidden' or 'underground' activities. These could be legal but are nevertheless concealed from authorities by producers to avoid the payment of taxes, social security, etc. The activities could also be illegal because their production is forbidden by law such as anti-piracy legislation.<sup>102</sup>
  - ii. The informal economy, characterized by activities undertaken by people without formal jobs who are engaging in some form of pecuniary action. This sector of the economy, which is not accounted for, is especially significant in developing countries and economies in transition, particularly for creative activities which require little capital and are normally produced without a fixed location, or from homes, small shops, or workshops.

187. Examples of non-observed and informal production in the creative sectors are street artists and local handcraft manufacturers working alone or with family members and acting as self-employed entrepreneurs. The International Labor Organization has proposed a streamlined methodology which is instrumental in establishing a concept of the informal economy within the SNA households sector. This is particularly relevant for policy analysis and formulation.<sup>103</sup>



188. If these activities were omitted, a significant share of the copyright industries might be omitted from the results. Therefore, efforts to cover the NOE and informal activities should be made to ensure that all enterprises are considered in statistical estimates, even if they are not covered by statistical enquiries. The 2008 SNA framework fully discusses the definitions and methods that allow for the inclusion of the NOE.<sup>104</sup> The inclusion of the NOE has been effectively considered in recent country studies that adopt WIPO's recommendations.<sup>105</sup>

189. Finally, from a dynamic perspective, the value added approach cannot take full account of the convergence between industry sectors; changes in the primary activities of economic establishments; and shifts in organizational structures (such as mergers and acquisitions, etc.) which may lead to the reclassification of companies and activities from one sector to another (such as from software to hardware) and can alter industry totals for important economic variables. These limitations have to be borne in mind when using this approach.

## **B. Data Availability**

190. Data used to estimate the value added of copyright industries tends to originate from two main sources: input-output tables and industry-specific value-added estimates. These are discussed below.

### a) Input-output tables.<sup>106</sup>

191. This is the preferred approach if the input-output framework is available. For each industry, these tables specify the inputs used and the outputs produced. Under the 2008 SNA guidelines, this information gives a comprehensive and consistent picture of the linkages and mechanics of an economy as a whole and offers a collection of detailed industry-specific statistics.<sup>107</sup>

192. Within the input-output framework, the copyright industries sector as such is not present, but it is normally possible to pinpoint statistically its activities as coded in Annex II. This is why using the methodological strength of the 2008 SNA, the articulation of which is robust enough to allow a great deal of flexibility to be applied in its implementation, enables researchers to consolidate information so as to complete the measurement of the copyright industries. This approach consists in grouping the industry and product classifications (CPC and ISIC) not to the existing standard, but according to their functional characteristics in the production of copyright products,

as described in Chapter 4. Thus, within the national accounts methodology, the copyright industries are a key sector which can be independently grouped and studied by looking at the relevant value-added macroeconomic aggregates and economic indicators.

193. If the information is comprehensive enough, the ultimate goal is to compile a satellite account of copyright industries.<sup>108</sup> For the copyright industries, this methodological apparatus involves a rearrangement of the central classifications, and the possible introduction of complementary elements and ancillary activities (such as a partial inclusion by way of the copyright factors). However, the underlying concepts of the SNA are not fundamentally altered. The main reason for a satellite account is to encompass all the detail of a given sector of interest which is not present in the existing standard classifications. The methodology for the compilation and analysis of input and output tables is discussed in further detail in Chapter 6.

There are two possible limitations of input-output tables.

- i. The first of these is the timeliness and complexity involved in generating the information required by the input-output model. Generating the information often implies surveying a wide selection of industries; this is very costly and time-consuming. In some countries, new tables are produced, on average, once every five years, with a two-year lag between the survey and the publication of new tables. As a result, input-output analysis relies on data which is invariably between two and seven years old.<sup>109</sup> This can be a problem if an industry is experiencing rapid technological change or reform because the mix of inputs required in the production process can change significantly.
- ii. In many cases the formal input-output tables may not be disaggregated to the desired degree of detail to produce credible estimates. If so, additional supporting analysis may be needed to make an informed estimate of the component of the sectors which can be said to represent copyright industries.

b) Industry specific estimates of value added

194. If statistical limitations regarding the input-output tables exist, the approach followed in the majority of studies relies on industry statistics which give separate



value-added and employment values by industry codes and which are consistent with the 2008 SNA methodological framework.

195. These indicators could be used instead of or alongside the economy-wide input-output tables. However, it must be borne in mind that some of the industry-specific value-added estimates could have originally been developed to update the input-output tables. Another limitation is that the indicators may not be uniformly developed for all industry sectors, and the absence of some industry classes may undermine the accuracy of a specific sector.

196. Where such data does not exist, it is possible to consider undertaking specially commissioned surveys. The aim would be to identify companies that are thought to be representative of the copyright industries and then to assess the difference between their final sales and their inputs. The concern with this approach is that to be statistically valid the sample would likely need to be large, crossing many traditional sectoral boundaries. As a result, such a survey would be very expensive, and the temptation would be to sample only a few, rather than many, companies. Evidently, accuracy can be obtained through a bigger investment in the survey.

### **C. *Current and Constant Value***

197. In countries where studies compile results for several years, it is recommended that value-added aggregates be presented not only in current (nominal) terms, but also in constant (real) terms. Normally, changes over time in the current values of the flow of goods and services and of many kinds of asset can be decomposed into changes in the prices of these goods and services or assets and changes in their volumes. This requires the precise use of both economic theory and axiomatic approaches to index number theory, together with the compilation of suitable price indices that capture the price changes of relevant baskets of goods and services or assets (such as consumer price indices, producer price indices, etc.). Price indices allow the calculation of the value added at constant prices by deflating current values. In this case, flows or stocks are said to be in real terms, in that they represent values at constant purchasing power. Interspatial comparisons between countries raise similar but even more complex problems than inter-temporal comparisons, since currency comparisons involving exchange rates are needed. For example, purchasing power parities establishing what the exchange rate between two currencies would be necessary in order for the exchange to be on par with the purchasing power of the two countries' currencies (in terms of the same basket of goods and services).

198. Ideally, industry data should be available in current and constant values, at least at the three-digit and preferably at the four-digit level. This can then be applied to lower industry classes and used to determine the rate of inflation or deflation for copyright products in each industry, according to whether the current prices increase or decrease relative to the value of the constant prices over a given period. This has important implications when determining the contribution of copyright industries to economic (GDP) growth (see the next section). If current values are considered, an increment in a sector's contribution could be the result of an inflation higher than that observed in the overall economy; while if it is lower, it could be because a lower rate of inflation affects these activities. To avoid the effect of price changes, constant values are desirable, since it is real (quantity) volumes which matter. Often, the compilation of price indices falls beyond the realm of copyright industry studies because it is resource-demanding and time-consuming, so the use of constant and real figures is recommended if the information is readily available.

199. Unfortunately, such information is available for a limited number of countries only.<sup>110</sup> Nevertheless, for many countries it has been found that copyright industries have grown at a faster rate than the whole economy both in current and constant terms, signaling their importance for economic growth. A larger increase in constant values compared to current values implies that the prices of copyright industry products are falling, or, in terms of the contribution to GDP change, are changing at a lower rate than those of the rest of the economy. In this situation, society is better off since the production of copyright products has increased in real terms (quantities) and contributed positively to economic growth.

#### 5.4.2 Labor Market Indicators: Contribution to Employment and Salaries

200. Employment is a majorly important variable in the economic analysis of productive activities, and this is also the case for copyright industries. In general, copyright activities are relatively labor-intensive, and hence there are many expectations surrounding their effect on a country's employment and the personal income of the labor force.



201. Employment in the copyright sectors can be measured in a number of ways:

- from industry-specific studies conducted by official statistical agencies, government bodies, or private parties;
- from census results – the advantage of this approach is that the classification of jobs tends to be at a relatively detailed level and hence the disaggregation of employment into particular occupations may provide significant insight; however, the problem with census results is that they are static because they reflect employment on a single day every five years, for instance; and
- from input-output tables.

202. There is some merit in measuring employment with a variety of indicators which complement each other. These indicators include:

- employment;
- FTE (full-time equivalent) employment;
- total hours worked; and
- compensation of employees.

203. While acknowledging that in many copyright industries, employment is not on a permanent or full-time basis, the measure of employment should be on an FTE basis, with other measures provided as additional descriptors if they are believed to be necessary.

204. A possible problem with accepting payroll as a key measure is that payroll values are reflected in the estimates of value added and income used to measure the relative size of a copyright industry. Thus, there is a risk of double counting if payroll is relied on as a key indicator.

205. Similar to the analysis described in Section 5.3.1 above, it is possible to conceive of a number of methods to develop estimates of employment. These would include:

- the use of regional input-output tables;
- average relationships between employment and outputs; and
- regression analysis across countries to estimate employment given certain copyright-specific and macroeconomic variables.

### 5.4.3 Foreign Trade

206. Export and import statistics are normally compiled by central banks, while copyright management organizations (CMO) are a possible source of information on the payment of royalties. The value of a national copyright industry in terms of the imports and exports of a country is an indicator of trends which deserve policy consideration. At the same time, the collection of such statistics is important because many copyright-protected products serve global markets (such as books, music, films, etc.) and reveal the specific role which copyright, as part of intellectual property, plays in international trade negotiations. Discussions set the adherents of free trade in cultural goods against the advocates of 'cultural exception'.

207. While the standard approach has tended to focus on the monetary values of trade flows, a complementary approach may be to assess the copyright share in a country's trade (the share of overall exports and imports) and also the contribution of the trade balance of copyright products (exports less imports) have on a country's current account balance (see the next section).

208. Both UNESCO<sup>111</sup> and UNCTAD<sup>112</sup> have made continuous efforts to establish a common methodology and classification of flows of cultural products (goods and services) worldwide. Figures compiled by UNCTAD reveal that world trade in creative goods and services (exports plus imports) was a record total of 624 billion US dollars in 2011, up from 559.5 billion US dollars in 2010. Figures show that international trade mostly takes place between developed countries, with the exception of China. China remains the leading exporter of creative physical goods. Its exports of creative products tripled from 32 billion US dollars in 2002 to 125 billion US dollars in 2011, an annual growth rate of 14.7 per cent.<sup>113</sup> China creates, produces, and trades in a mixture of traditional and high-tech creative products, which are domestically and externally created or designed. As for services, the US leads the rankings for foreign sales or exports, particularly in the audio-visual, publishing, and, more importantly, computer software sectors, with a value of 142 billion US dollars.<sup>114</sup>

209. Many factors explain bilateral trade in copyright, creative, or cultural products. Besides the usual variables associated with spatial related frictions (transport costs) and non-transport related frictions (tariffs and non-tariff barriers), it has been found that cultural 'proximity' or affinity in terms of preferences (tastes), such as a common language or colonial links, explains trade volumes to a large extent. These also have



a positive spillover effect on non-copyright related goods. The academic literature on this issue is shedding light on the determinants of copyright trade.<sup>115</sup>

210. Making a distinction between trade in goods and trade in services is not always easy, nor can it be undertaken in a practical way. With services, production and consumption normally take place simultaneously (such as live performances in theaters), but this is not the case for goods (listening to a CD or watching a DVD). As a result, the analysis of international trade needs to capture the following two elements: the physical trade (goods) in copyright products; and service flows, including fees, commissions, and royalties.

211. The physical trade (goods) in copyright products is a relatively easy element to account for because of the availability of statistics which follow the COMTRADE database based on the IMTS Rev.2 and SITC Rev.4 classifications. Statistics are published by the following.

1. National statistical agencies and central banks.
2. Supranational statistical agencies. In particular, UNCTAD regularly compiles data for trade in creative goods and services (UNCTAD's Global Database on the Creative Economy), although the International Monetary Fund (IMF) and the World Bank also provide comprehensive statistics on global trade flows. However, it should be recalled that, for the most part, such databases are reliant on the provision of information from national statistical agencies and governments.
3. Major industry associations. These are associations in the major copyright sectors, such as music and film. They tend to compile and publish international trade statistics.
4. Specially developed surveys. These add to the information compiled, but also add to the overall cost of studies.

As for service flows, including fees, commissions, and royalties, this information is likely to be highly susceptible to variation and sampling errors and is less likely to be available in developing countries. The latest edition of the Balance of Payments and International Investment Position Manual (BMP6) published by the IMF discusses the definition and classification of charges for copyright and intellectual property

such as fees, commissions, and royalties. In particular, it considers how to account for charges for the use of copyrights and licenses to reproduce or distribute (or both) intellectual property embodied in produced originals or prototypes (such as copyrights on books and manuscripts, computer software, cinematographic works, and sound recordings) and related rights (such as for live performances, and television, cable, and satellite broadcasting).<sup>116</sup> Additionally, the existing classifications capture services and fees related to the production of motion pictures (film, videotape, disk, electronic transmission, etc.), radio and television programs (live and on tape), and music recordings.<sup>117</sup> Included are amounts receivable or payable for rentals of audio-visual and related products and fees to actors, directors, and producers involved in theatrical and musical productions. Finally, mass-produced recordings and manuscripts which are purchased or sold outright or for perpetual use are included under audio-visual and related services if delivered electronically.

## **5.5 Performance of Copyright Industries in National Economies**

212. It was anticipated that from the first set of size indicators relative to the value added of copyright industries, employment, and foreign trade, a second set of performance indicators could be obtained, as described below.

### **5.5.1 Labor Productivity**

213. Labor productivity based on value added is the single most frequently computed productivity statistic. It constitutes the simplest single-factor measure of performance, relating a quantity index of output (value added) to a single quantity index of labor (number of employees or FTE). Generally, there is a wide disparity in labor productivity across copyright industries, with the mass media and audio-visual sectors exhibiting the highest values because they are capital-intensive, while live performances and handcrafts exhibiting the lowest values because they are labor-intensive. Therefore a general picture does not exist.

214. Labor productivity has a rather simple interpretation: it shows how productively labor is used to generate value added. Labor productivity changes summarize the joint influence of changes on a host of factors, including technical change (neutral and biased); organizational and efficiency changes within (technical and allocative) and between (industry structure) companies; and the effects of economies of

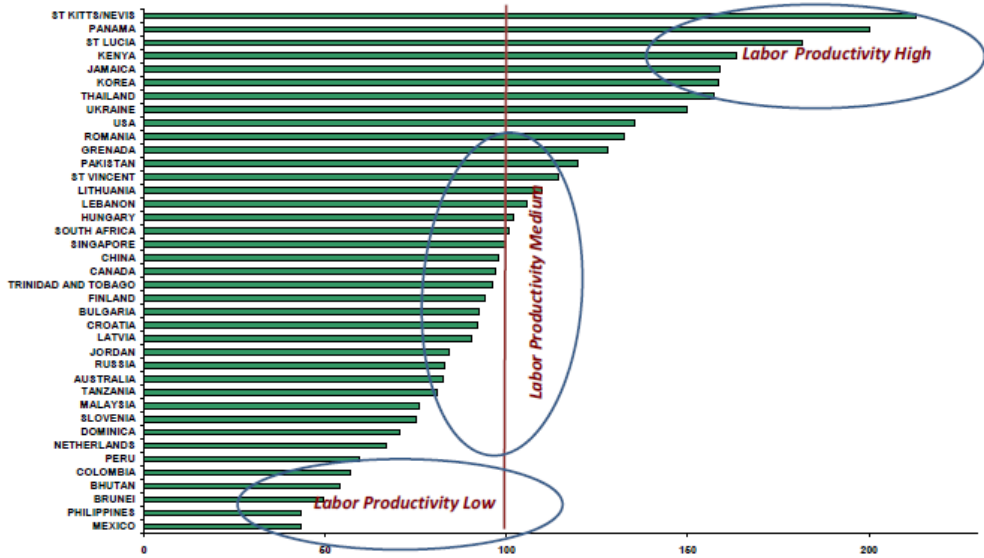




scale, varying degrees of capacity utilization, and measurement errors. However, because labor productivity only reflects productivity in terms of the personal capacities of workers or the intensity of their effort, it is incapable of capturing any further information, particularly the combined effects of changes in capital inputs, intermediate inputs, and overall (multifactor) productivity.<sup>118</sup>

215. Nevertheless, for the purpose of the present studies, labor productivity provides a micro-macro link, such as the industry contribution to economy-wide labor productivity and economic growth. At the aggregate level, when employee compensation (income) is available, it constitutes a direct link to income per capita, a widely used measure of living standards. The measure can be qualified by adjusting for changes in working hours, unemployment, labor force participation rates, and demographics. From a policy perspective, labor productivity based on value added is important as a reference statistic in wage bargaining and can be compared across different sectors.

216. From the results obtained in the studies performed over the last decade, it is possible to calculate the labor productivity of the copyright industries relative to that of the overall economy by calculating the ratio of the added value copyright industries contribute to GDP to the share of the number of employees in overall employment. After normalizing their value by the mean and indexing the average to 100, it can be seen that an index above this value indicates that a higher share of GDP output from creative industries is achieved with a lower share of labor input. Comparing the rankings of countries shown in Chart 6.1 with those presented in Chapter 1 in terms of the contribution of copyright industries to national GDP and employment, it is observed that countries which have the highest labor productivity do not necessarily have a high contribution to GDP or even labor, which is a deviation from the expected pattern. The high productivity indices in countries are a result of a large monetary value per unit of labor. In some cases, the values of the index can be explained by a relatively low share of formal employment in the creative sector.

**Chart 5.1 Relative Labor Productivity Index, Selected Countries**

Source: WIPO's National Studies on Assessing the Economic Contribution of the Copyright Industries, Creative Industries Series.

### 5.5.2 Foreign Trade Balance

217. The difference between the value of exports and imports (balance of trade) is part of the current account balance (along with the balance of the primary and secondary income),<sup>119</sup> the value of which represents the gap between savings and investments in an economy and results in a net lending or net borrowing position. A current account surplus increases a country's net foreign assets by the corresponding amount (net lending), and a current account deficit does the reverse (net borrowing).

218. When the value of exports exceeds the value of imports, this results in a positive net sales position with the rest of the world and therefore contributes to a current account surplus, while negative net sales abroad generally contribute to a current account deficit. The balance of trade is normally the largest component of the current account, so a current account surplus is usually associated with positive net exports (trade surplus) and vice versa (trade deficit).



219. Since trade surpluses add to the gross domestic product and deficits subtract from it, industries running a positive trade balance are seen as income and job producers and therefore qualify for immediate support from economic agents and, particularly, government agencies. The opposite is true if an industry runs a trade deficit. In this context, the balance of trade is seen as an indicator of the competitiveness of an industry in the global market. In the absence of non-transport trade barriers (tariff and non-tariff), and particularly within 'single market' areas, the balance reflects whether a country has an advantage in production costs (specifically labor, because this factor represents the largest share of operating costs in many industries, but also capital costs, taxes, subsidies, etc.), and whether it is able to reap the benefits of international trade.

220. According to the study results from many countries, non-English speaking countries are generally net importers in the audio-visual, media, and software industries, because Anglo-Saxon countries, and particularly the US, enjoy large domestic markets which allow companies to exploit the economics of scale, scope, and density associated with capital-intensive industries.<sup>120</sup> However, with non-core copyright industries, the picture is less clear and varies notably across categories. For example, developing countries are net exporters of interdependent products (i.e. TV sets, electronic equipment, hardware, etc.) because they have a clear labor cost advantage in the manufacturing activities which facilitate the creation, production, and use of copyright products. An example is the aforementioned case of China and of South-East Asian countries, but it is also true for Mexico and other Latin American economies.<sup>121</sup>

### 5.5.3 Contribution of Copyright Industries to Economic Growth

221. Several countries have consistently produced reports on a timely basis, generating time-series statistics which add a dynamic dimension to the studies. Table 5.1 shows a systematic collection of the results obtained in the last decade and published by WIPO in its series National Studies on Assessing the Economic Contribution of the Copyright Industries. In most countries, copyright industries grow at a higher rate than the national economy. Differences depend on whether figures are compiled in current (nominal) or constant (real) values, and therefore include the effect of inflation and the particular position a country has in the economic cycle.

**Table 5.1 Cumulated Growth Rates of Values Added and National GDP in Copyright Industries, Selected Countries**

Country	Period	Current or Constant Values	Cumulated growth rate (%)	
			Copyright Industries	Economy
Singapore (Core CI)	1986-2001	Constant	8.9	7.6
Canada	1991-2002	Current	6.5	2.6
Mexico	1998-2003	Current	3.7	10.0
Colombia	2000-2005	Constant	26.3	18.3
Australia	1996-2007	Current	66.0	35.0
Malaysia	2000-2005	Constant	10.7	3.2
China	2004-2006	Current	71.1	31.8
Finland	2005-2008	Current	20.0	2.4
Pakistan	2004-2008	Current	30.0	28.2
Panama	2002-2006	Constant	19.2	30.4
Slovenia	2002-2007	Current	49.2	52.2
Bhutan	2005-2010	Constant	15.0	9.5
Brunei-Darussalam	2005-2006	Current	-7.9	15.8
Republic of Korea	2006-2009	Constant	21.9	9.6
Thailand	2002-2006	Current	36.6	38.7
United States	2009-2012	Constant	5.0	2.1

Source: WIPO National Studies on Assessing the Economic Contribution of the Copyright Industries, Creative Industries Series, Nos.1-6, Geneva; Siwek, S.E. (2013), Copyright Industries in the US Economy: The 2013 Report, Economists Incorporate, Washington.

222. It is possible to accurately measure the contribution of copyright industries to aggregate national GDP and employment changes by adopting a simple methodology already tested in other studies.<sup>122</sup>

223. The estimate of the contribution of copyright industries to the actual overall growth rate of an economy as a whole, either in GDP or employment, uses the share of the copyright industries in the relevant variables as weighting factors. These are applied to the growth rates achieved by the copyright industries during the same period and are then related to the overall growth of the economy. The simple growth accounting procedure, which can be enhanced with shift-share analyses, can be exemplified as follows, taking GDP growth as the target variable.<sup>123</sup>

Given information on

$S_{CI}$  = core copyright share of the GDP in year  $t$ ,

$\Delta G_{CI}$  = core copyright growth rate from period  $t$  to  $t+1$ ,

$\Delta G_E$  = total economy's GDP growth rate from period  $t$  to  $t+1$ ,

it is possible to calculate the core copyright industry percentage contribution

$\Delta S_{CI}$  (%) to the aggregate growth rate of the economy by applying the following formula:

$$\Delta S_{CI} (\%) = [S_{CI} \times \Delta G_{CI}] / \Delta G_E \times 100,$$

where  $S_{CI} \times \Delta G_{CI}$  is the weighted core copyright industry growth rate.

224. This simple methodology can be applied to each industry category, substituting the share of interdependent, partial, or non-dedicated copyright industries for the share of core industries,  $S_{CI}$ , and can be extended analogously to employment and other relevant variables in the study.

225. As an example, based on this procedure, between 2003 and 2007 US copyright industries not only increased their share of US GDP in real terms, outpacing the whole economy (for this period, their respective compound growth rates were 8 per cent versus 3 per cent), but also contributed about 30 per cent of the overall GDP growth rate.

## 5.6 Institutionalizing the Preferred Analytical Framework

226. The approaches discussed in the previous sections reflect the mainstream analytical frameworks being employed to analyze the economic contribution of copyright industries.

227. The process of methodological standardization that has already occurred in studies of copyright industries conducted worldwide makes it possible to follow in the footsteps of other relevant industries such as tourism. As an ultimate goal, it should be possible to eventually convince supranational and domestic statistical bodies to standardize the assessment of the size of copyright, creative, and cultural industries in satellite accounts. Satellite accounts are extensions of the core System of National Accounts (SNA), the aim of which is to present information which focuses on a particular aspect of the economy in much more detail than the core SNA. Satellite accounts involve the rearrangement of existing information within the national accounts so that an area of particular economic or social importance can be analyzed

more closely. The term satellite is used because the information given is outside what is currently provided by the national accounts.

228. Therefore, as shown in Chapter 6, at this stage of economic research on surveying copyright industries, and given the cumulative experience of the last decade, the time is ripe for the creation and compilation of satellite accounts, if the required statistical information is available. In fact, the conditions which were set in the previous version of the *Guide* are close to being met:

- a globally recognized standard has been developed;
- national and supranational statistical agencies are intimately involved in the process of developing comparable standards (see Section 4.1); and
- the process has been institutionalized and accepted by governments (i.e. national copyright offices and statistical agencies are normally involved in the elaboration of the studies), guaranteeing that local teams have the independence necessary to pursue their studies.

## CHAPTER 6

### THE MEASUREMENT PROCEDURE

#### 6.1 Overview

229. This chapter suggests how to organize the relevant information, how to structure research, what measurements to use, and how to present the analysis. Attention is paid to certain general limitations and difficulties which have been faced by past studies.

230. The material and conclusions proposed are based on the analysis of existing and applied approaches and methods in past national studies, together with the 2008 SNA. The proposals bear in mind that most countries still use the 1993 SNA. Proper treatment of the trade in services is also a significant consideration of the recommended procedures.

231. The chapter provides a set of tools which should assist in the preparation of valid and reliable estimates for any country. Regarding specific national situations, however, the 2008 SNA has also introduced the idea of ‘supplementary’ items and tables. These refer to items which may be of limited relevance in some countries or which, while of analytical interest, cannot be prepared in a table to the same standard of accuracy as the main set of accounts<sup>124</sup>.

232. This approach is highly recommended for countries whose copyright laws define unique areas of protection. For example, in Trinidad and Tobago, the laws protect ‘works of mas’, so in that country’s study, a separate set of tables were produced for works of mas.

##### 6.1.1 Basic Ideas from the SNA – Satellite Accounting

233. The basic idea of the SNA is to compile accounts for the whole economy or for the set of institutional units which belong to the same class of activities (sector or subsector). In this *Guide*, the subset of interest produces output based on the intellectual property guarantees of copyright. These subsets are ‘sectors’ in the sense of satellite accounting, as conceived in the SNA.

234. The proposals reflect the general guidelines on satellite accounting presented in the 2008 SNA, in particular its recommendations for adjusting to the new findings of international methodological research and to the rapidly evolving economic environment of many countries since the 1990s, when the 1993 SNA was developed.

235. The methods of satellite accounting add information which lies beyond the central national accounting framework used for economic policymaking. However, these methods are consistent and comparable with the national accounting framework. They have now become accepted means of developing and testing new methods, indicators, and data sources.

236. In order to describe and measure copyright-based activities in a way that is consistent with the satellite accounting framework of the SNA, the *WIPO Guide* elaborates a specific framework for copyright-based activities, which is an alternative to the framework of the SNA. Such an approach allows for the adaptation of the various classifications and for the measurement of additional aggregates to reflect how copyright percolates throughout the economy. In the process, certain basic ideas of the SNA are used to determine the following.

- a) National expenditure on copyright-based activities, that is:
  - i intermediate consumption of the copyright-based industries; and
  - ii final consumption of the copyright-based industries.
  
- b) An extension of the production boundary to include the production of establishments which rely on copyright. In some countries, this might include the extension of production into the activities of establishments operating in the household sector, even if these include the production of domestic services for home consumption.
  
- c) A broadening of the concept of fixed assets used in the copyright sector to include a variety of consumers, which are really used as capital to produce future output and income streams for their owners, hence extending the concept of investment. This step usually involves reclassifying under investment (i) some forms of intermediate consumption (business expenses) that really serve to produce copyright; and (ii) some forms of consumption by government and non-profit organisations that really serve to produce copyright.





## 6.1.2 New Features

237. Certain new features in the 2008 SNA, reflected in this *Guide*, improve efforts to measure the copyright sector. Reference to the 2008 SNA is highly recommended even when the national statistics are based on the 1993 SNA.

238. The proposal in this *Guide* is to account explicitly for ‘intellectual property products’ previously called ‘intangible produced assets’. Consider Table 6.1, which represents the income statement of an establishment in standard form. It documents the income and expenses generated by assets on the balance sheet, which document assets, liabilities, and the resulting capital which is deployed with manpower to produce output. The primary goal of such a table is to clarify earnings before income, taxes, and interest. Modern accounting practices require a careful distinction between routine and non-routine earnings.

239. Routine earnings are those that arise from the standard production process, that is, from the application of capital and manpower, without use of intellectual property. Non-routine earnings are intellectual property earnings, which are generated by patents, copyright, industrial designs, geographical indications, and other intellectual property assets. In very successful companies, such intellectual property is usually significantly greater in value than routine earnings. This is what is expected of companies whose primary output is based on copyright. This type of distinction also requires the corresponding disaggregation of operating expenses, as in Table 6.1, to focus attention on research, experimentation, and development expenses.

**Table 6.1 Example of the Income Statement of an Establishment under IASB rules**

Category	Data	Metadata
Revenue		Income from business activities (sales of goods and services to customers); donations received, interest, royalties, fees – time bound.
Sales		Sales of goods and services to customers, less discounts, returns, and allowances.
Operating expenses		Ongoing costs for running a business and generating its products; contrast with capital expenditures to provide the non-consumable inputs for production; vary with the quantity produced and include the materials and components purchased.
Cost of goods sold		All the costs involved in carrying the goods sold; contrasts with the cost of goods not yet sold (deferred costs of inventory in hand). Includes the costs of purchase, conversion, and related and covers materials (intermediate), labor, and overheads.
Selling, general, and administrative expenses		Accounting fees, licenses, maintenance and repairs, advertising, office expenses, supplies, attorney fees/legal fees, utilities, insurance; property management; property taxes; travel and vehicle; leasing commissions; wages and salaries related to sales and administration.
Research and development expenses; investigation and experimentation expenses		Expenses accrued in creating and discovering new knowledge and ideas in science or culture for the purpose of developing valuable new goods, processes, and services. Might take time and differ from other expenses in that the outcomes are longer-term and very uncertain; often focuses on meeting unmet needs.
Depreciation and amortization		An expense (allocation) to cover the decrease in asset value from use; applied to recover the cost of the asset being depreciated.
Other expenses		Any expense other than those listed above – a category not elsewhere classified.
<b>Total operating expenses</b>		
Operating income		Difference of sales and operating expenses.
Non-operating income		Other gains or losses not accounted for by core product sales, except financial; including asset sales or asset write-downs and foreign currency value adjustments; unusual capital gains and losses; or profit and losses from investments. These are usually non-recurring incomes.
EBIT		Sum of operating income and (other) non-operating income.
Financial income		Dividend income from stocks, bonds and property.
<b>Income before interest expense</b>		
Financial expense (interest)		Interest payments; bank charges and fees.
Earnings before taxes (income taxes)		Difference of revenues and expenses; typically grouped as routine and intellectual property earnings; intellectual property earnings are usually high and so can attract high investment.
Income taxes		
Net Income (Profit)		

240. The matching information on intellectual property assets must be sought in establishments' balance sheets. The data is illustrated in Table 6.2 below. The data gives information about the pool of resources, including skills, available to create output. Intellectual property assets and other goodwill such as tacit knowledge

feature prominently in this resource pool as crucial keys to high profit and high levels of retained earnings in the capital of the company. These are the secrets of high profit in the copyright sector.

241. Intellectual property earnings usually arise from the intensive application of capital and manpower which rely heavily on intellectual property assets, previously known as intangible assets, and the capacity to produce them. In general, in the 2008 SNA the treatment of intangible assets has been refined and renamed ‘intellectual property products’ to emphasize that they exclude third-party rights and include rights over produced knowledge of one kind or another. Crucially, these include tacit knowledge, which is often but not exclusively protected as trade secrets. Furthermore, the costs of ownership transfer in the form of contracts, leases, and licenses are explicitly accounted for in the pool of non-produced assets.

242. In the development of a study, it should be noted that items such as film and sound originals are now explicitly recognized in the capital account. Furthermore, databases, originals, and copies are now explicitly treated as capital items and the 2008 SNA allows expenditure on research and development to be treated as capital formation. A natural extension of this is the treatment of expenditure on research and the exploration of cultural expression used in developing copyright as capital formation. Table 6.2 illustrates these points.<sup>125</sup>

**Table 6.2 Intellectual property products in Gross Fixed Capital Formation**

Costs of ownership transfer on non-produced assets (contracts, leases and licenses), of which
Marketable operating leases
Permits to use natural resources
Permits to undertake specific activities
Entitlement to future goods and services on an exclusive basis
Research and development (including exploration of cultural expression)
Mineral exploration and evaluation
Computer software and databases
Computer software
Databases
Entertainment, literary, or artistic originals
Other intellectual property products

243. Related to the value of the intellectual property assets, the 2008 SNA recommends proper accounting for all capital services in the context of extending the measurement of operating surpluses. The importance of this is emphasized alongside the importance of knowledge expressed as intellectual property products.<sup>126</sup>

244. A good strategy for the analysts conducting the study is to follow the 2008 SNA recommendation and prepare a table, supplementary to the standard accounts, which displays the implicit services provided by non-financial assets, recognizing that the contribution of labor input to production is measured in the compensation of employees.

245. A substantive reason for emphasizing the importance of capital services and intellectual property products is that they often comprise a significant component of the asset base of the self-employed and small business operators. However, the services of the self-employed and small business operators are often not properly measured and considered when accounting for the scale of the mixed income of the operators or for the operating surpluses of formal enterprises. Similarly, a failure to measure these services of intellectual property products also leads to difficulty in disaggregating mixed income into its labor and capital components. The concepts of capital services and intellectual property products give a way of collecting and probing the data so that all of the capital is comprehensively and consistently measured.

246. Another substantive reason for emphasizing the importance of capital services and intellectual property products is improvement in the measurement of the consumption of fixed capital and, ultimately, in understanding how copyright contributes to productivity and productivity growth in the economy.

247. The proposals of this updated *Guide* also encourage efforts to provide more than a single snapshot of the copyright sector at a point in time. Many countries that make estimates now produce information for successive periods. Practitioners are encouraged to move to this practice of providing a continuing flow of information over time to encourage and support the process of monitoring, analyzing and evaluating the contribution and performance of the copyright sector.

248. In order to understand the workings of the copyright sector, it is essential to observe and analyze the economic interactions between the copyright industries and the other sectors of the economy. The *Guide* now encourages presentation



and analysis at all levels: individual economic agents; institutional units; institutional sectors; and the whole economy.

249. Great care should be taken when choosing approaches and methods for surveying value added, employment, and foreign sales. A study will always reflect a combination of methods and approaches. This choice is likely to be influenced by the availability and organization of national statistics. This chapter recommends the application of the methodologies recommended by the System of National Accounts and using international classification systems in order to improve consistency and comparability over time.

250. Preferably, official data should form the basis of the study. However, the unavailability of data in some areas will inevitably necessitate the use of estimations and approximations, and it may be necessary to supplement official statistics with special studies or surveys. Even though necessary, supplementary statistics should be treated with caution, and preferably used for establishing ratios that cannot be calculated otherwise.

251. Since some of this supplementary data may come from administrative sources, the information should be processed to ensure that it is representative. It is preferable for supplementary data collection to be designed and implemented by, or in close collaboration with, the relevant national statistical organization so that the data collected is sufficiently consistent with that used in the national accounting system.

## **6.2 Measurement Procedure**

252. The measurement procedure should comprise the following four steps:
- a) identification and classification of copyright-based industries and intellectual property products, giving special consideration to the distinction between intellectual property assets and services;
  - b) collection of relevant data, including data on the national GDP disaggregated according to the industries needed for the study;

- c) measurement of the contribution of copyright-based industries, their share of national GDP, and comparisons with other selected sectors; and
- d) analysis and presentation of the survey results.

### 6.2.1 Step One: Identification and Classification of the Copyright Industries and Products

253. A principal objective of a study is to present a comprehensive and credible picture of the industries that are making measurable and quantifiable copyright contributions to the national economy. A starting point would be identifying and classifying the industries or economic activities to be studied. Such a list has already been proposed in Chapter 4 of this *Guide*. It is crucial the inclusion of copyright-based industries which have been identified and broken down into the four subgroups described in Chapter 4 is coherent so international comparisons can be made. As explained above, the comprehensive list of core, interdependent, partial, and non-dedicated support industries catches the copyright effects created throughout the economy.

#### 6.2.1.1 Identification of Copyright Industries and Products

254. In the WIPO approach to copyright accounts, industries are defined and understood in the same way as in the SNA and the ISIC approaches. In particular, 'an industry consists of a group of establishments engaged in the same, or similar, kinds of activity'.<sup>127</sup>

255. As in the SNA, industries are defined without regard to whether or not the establishments are market producers. Focus is purely on the nature of the activity itself, considered from the standpoint of the inputs and technology used in the production process.

256. The WIPO method adjusts and extends the scale and scope of many industries and expenditures in the standard national accounts to fit the production and use of copyright. Indeed, the power of the WIPO method comes from choosing the appropriate type of disaggregation to study how copyright shapes the creation of added value.

257. The first step in drawing up accounts for the copyright sector is to identify the copyright activities and their corresponding products. This involves grouping together items shown in different parts of ISIC or Central Product Classification (CPC). For the copyright sector, guidelines on such identification have already been presented in Chapters 4 and 5 of this *Guide*, with details in Annexes I and II. The analysts conducting a study must review the list of the copyright industries proposed in Chapter 4 and adapt it to the country-specific situation.

258. This adaptation should be guided by what the local copyright law defines and protects and by the structure of industry in the country. It is possible that not all of the activities indicated in Chapter 4 are present in a given country or that new activities have to be added based on local law.

259. Having identified an activity, information will have to be collected about the industries which will be studied, checking for compliance with the copyright and related rights legislation and analyzing the layers of economic activities involved. This would mean excluding industries which are not protected under local copyright law and adding industries which are covered but may have been excluded. When adding an industry, it is necessary to ensure that its contribution is identified to ensure that the estimates are comparable with those of other studies. The adjustments introduced in this regard must be fully explained in the survey.

#### 6.2.1.2 Classification of Copyright Industries

260. Once identified, activities must also be classified within the classification system adopted by the national statistical organization. The identified industries are then grouped to obtain the WIPO groups, divisions, and sections in much the same way as in the SNA. The classification of the industries is closely linked to the process of data collection and to the availability of data.<sup>128</sup> A starting point would be to locate the sources of appropriate data on industry activity. A major issue to be addressed is the level of compatibility of industry statistics with the information needed to calculate value added. To address this issue, it is recommended that due attention be given to the respective international standard industry classification codes.

261. The International Standard Industrial Classification (ISIC) is a standard United Nations classification of economic (production) activities arranged so that

establishments (entities) can be classified according to the activity they carry out. It is the reference classification for productive activities used by most nations for the collection and reporting of statistics.

262. The categories of ISIC at the most detailed level (classes) are delineated according to what is, in most countries, the customary combination of activities described in statistical units. The groups, divisions, and successively broader levels of classification combine the statistical units according to the character, technology, organization, and financing of production. Wide use has been made of ISIC, both nationally and internationally. According to ISIC methodology, each activity is placed under a selected hierarchy: section, division, group, and class. Detailed explanations are also provided of what is included and excluded from the respective categorization.<sup>129</sup>

263. Internationally, ISIC is extensively used either unchanged or after some appropriate adaptations to fit local conditions. The previous ISIC, Rev.3.1, dates from 2002. In the past decade, the economic reality in most countries has changed at an unprecedented rate and new activities and forms of industry have emerged. Compared to the third revision, the update contains, among other things, some new alternative aggregations and extended definitions of individual classes, drawing on research already conducted for other classifications. In Annex II, the classifications are based on the 2008 ISIC Rev.4 update, since these are closer to existing realities. For countries using alternative classifications, other national statistical offices have developed correspondence tables between the codes under the two classification systems.<sup>130</sup>

264. The table in Annex I describes the WIPO categories (core, interdependent, partial, and non-dedicated) and the main groups and related subgroups of industries in these copyright categories. These are the WIPO copyright-based categories in Chapter 4. Annex II provides a mapping of the economic activities in the WIPO subgroups to the industry classes in ISIC. The table is only indicative, because such an annex must be adapted to the specific facts of a country. With respect to the mapping presented in Annex II, it should be noted that there are many-to-one and one-to-many combinations from the WIPO subgroupings of economic activity and the ISIC industry classes and vice versa. This means that an activity in the WIPO subgroupings may be mapped to two or more industry classes in ISIC and one activity





in the ISIC can be mapped to many in the WIPO subgroupings. It is up to national statistical expertise to decide what the more appropriate classification should be.

265. The ISIC codes have been used in many of the past studies and a decision has to be taken about to where the bulk of the specific copyright-based activity is reported. Double counting must be avoided. While the ISIC methodology only provides a pattern, further details and data can be obtained from National Accounts and other official statistical publications in each country. At the national level, data may be disaggregated to a more detailed level than the four-digit classes in the ISIC.

266. In conducting a study, it may be useful to refer to the national adaptations of the ISIC in other countries or country groupings. This is because others could provide useful perspectives and information which can help to develop national adaptations. A useful reference could be the classification system adopted by the member states of the European Union. NACE (Statistical Classification of Economic Activities of the European Union), CPA122 (Classification of Products by Activity in the European Economic Community), and PRODCOM (EU Statistical Survey of Industrial Production) provide up to seven-digit breakdowns of activity, which can be helpful.<sup>131</sup> A list of corresponding classification category numbers for the copyright-based industries is given in Annex III. In this particular case, it should be emphasized that a great degree of correspondence already exists between ISIC and NACE and that many national statistical offices have developed correspondence tables between the codes under the two classification systems.<sup>132</sup> In developing any national adaptation, it is important to collaborate closely with the national statistical organization.

#### 6.2.1.3 Industry and Product

267. The *Guide* is consistent with the extensive guidelines of the 2008 SNA regarding how products and industries align. Preserving consistency with the framework and methods of satellite accounting necessitates the construction of a list of products related to the industries the economic value of which can be analyzed and monitored in terms of its supply and various uses (intermediate, final, investment, and export).

268. Since the activities of the *Guide* focus on the nature of inputs and technology, there is no one-to-one mapping from activity or industry to product. To find the

relationship between an activity in the *Guide* and a product, it is necessary to use a product classification, such as the CPC, which focuses on the physical properties of the goods and the nature of the services produced.

269. By comparison, the ISIC focuses on the inputs of the production process and the technology used in transforming inputs into outputs. Indeed, this focus explains why the central question of the SNA is: what are the inputs bought? Every effort is made in the CPC to define goods and services in such a way that they are normally produced by only one activity, as defined in ISIC. But even this correspondence is not guaranteed because of the variety of criteria employed to define goods and services and the variety of options often available to produce a single product. Similarly, an activity in ISIC may produce many different products, even though in most cases the correspondence is one-to-one.

#### 6.2.1.4 Classification of Products

270. As with the classification of industries considered above, there are several international product classifications which, although designed for specific purposes, can also be used to derive an adaptation which corresponds to national peculiarities while upholding the international compatibility.

271. For the purpose of developing a classification of products to meet the accounting needs of a country study, this *Guide* recommends the use of CPC 2.0, which was developed, revised, and released by the United Nations Statistical Commission in 2008. A correspondence table exists to match products listed in the CPC to the industries in ISIC. The products listed in the CPC can also be used to detail foreign trade statistics, especially the trade in services, and balance of payments statistics.

#### 6.2.2 Step Two: Collection of Relevant Data

272. As a first step, the collection of data involves compiling all the available and relevant official statistical publications which give details by industry. A table of the data sources used in the study is indispensable and should be compiled.

273. The compilation of statistical data involves three stages:

- a) compilation of available official statistical data by industry classes;
- b) compilation of additional statistics, disaggregating the data to the required level of detail; and
- c) identification of grey areas and preparing and sending out questionnaires where statistics are not available.

274. As indicated above, the Table of Industries as proposed in Annexes I to III has to be adjusted to national statistical systems and accounting procedures. In some of the identified industry classes, a number of activities are reported together. When a specific copyright-based economic activity is reported together with other activities, it must be separated from the aggregate numbers. Where disaggregation levels are not adequate, different techniques could be used to extract the appropriate proportions. Later in this chapter, some proposals are made about estimating missing figures for activities which are not reported nationally.

Important information sources are national accounts; industry-specific statistics; national surveys and specific reports prepared by the national statistical office; industry reports commissioned by the government or by business associations related to the industry; other types of statistics at branch and company level; product statistics; balance of payments figures; external trade statistics; tax revenues; and the national budget.

#### 6.2.2.1 Supply and Use Table (SUT) Data

275. Since the introduction of the 2008 SNA manual, a growing number of advanced and developing countries are adopting the structure of supply and use tables (SUTs) and their satellite accounts to measure the economic contribution of specific industries. The key product and key industry accounts of the copyright sector may be usefully developed by taking advantage of the details of the SUT of a country, if they are available.

276. SUTs are valuable sources of detailed activity data, especially if they are available in a balanced form in a country conducting a study. If they are unavailable, a study can rely on supply and use details from other countries with a similar structure.

As clarified in the 2008 SNA<sup>133</sup>, SUTs are produced in the form of matrices that ‘record how supplies of different kinds of goods and services originate from domestic industries and imports, and how those supplies are allocated between various intermediate and final uses including exports’.

277. These tables are designed as follows.

- a) In the columns, industries are shown in detail. Industries of interest (such as the copyright industries identified in Chapters 4 and 5) may therefore be aggregated from these details.
- b) In the rows, key products are also shown in detail, so here too products that are of interest can be aggregated.

278. The supply table treats the industries as producers or suppliers of products. In principle, imports are treated as coming from suppliers in the rest of the world. In the columns of the supply tables, producing industries, grouped as market and non-market producers, are shown in detail. So industries of interest (such as the copyright industries identified in Chapters 4 and 5) may be aggregated from these details. The columns of other associated sub-matrices show the other values that are needed to arrive at the total supply of products and to adjust the domestic supply from basic prices to purchasers’ prices. The required values are:

- a) imports of goods and services, and trade; and
- b) transport margins and taxes minus subsidies on products.

In the rows of the supply table, domestic products and imported products are also shown in detail. So here too products of interest can be aggregated.

279. The use table treats the industries as buyers of products and factor inputs. Exports are treated as purchases by the rest of the world. In the columns of the use table, the producing industries, grouped as market and non-market producers, are shown in detail. So, again, industries of interest (such as the copyright industries identified in Chapters 4 and 5) may be aggregated from these details. The other columns of the use table (other sub-matrices) show final users and the exports of goods and services, as well as taxes minus subsidies for products which bring the valuation of total products back to valuation at purchasers’ prices. In the rows of the use table, the domestic products used by the producing industries in intermediate

consumption and the exported products are also shown in detail. So here too products of interest can be aggregated.

280. A separate sub-matrix is added below the absorption matrix of the use table to record the value added by producing industries in the columns and by its components in the rows. Below the supply and use table, extra rows are also included which show the following:

- a) labor inputs; and
- b) gross fixed capital formation and stocks of fixed assets – these can be usefully supplemented following the treatment of the intellectual property assets in the 2008 SNA.

The following are also noted with respect to the use tables.

281. Columns for gross fixed capital formation and changes in inventories respectively can be broken down between:

- a) (one or more) key sectors or industries; and
- b) other sectors or industries.

282. If SUTs are available, then a special sub-matrix can be prepared for copyright activities. Even if they are not available, it would still be useful to assemble the data obtained for the copyright sector in the form of an SUT designed specifically for this sector.

283. Tables 6.2 and 6.3 together provide an example of the supply and use framework applied to the copyright sector when a complete balanced SUT has not been prepared for the national economy. The copyright products need to be identified and grouped according to the copyright categories agreed upon previously. These copyright products are described in the rows of both the supply table and the use table.

284. Utilizing the principle of satellite accounting, the domestic producers of copyright products in the copyright economy need to be determined and grouped according to the copyright categories discussed previously, namely core copyright

industries, inter-dependent copyright industries, partial copyright industries, and non-dedicated copyright industries, along with their subgroups.

285. Here, as in general, the domestic producers of copyright products are detailed in the columns of the supply table, separated into market producers and non-market producers. There are columns for imports of copyrighted goods and services and to record both the trade and transport margins and the taxes and subsidies on copyright products. A special column is included to record the shares (ratios) of total supply estimated for copyright products.









286. The columns of the use table show the same copyright producing industries as are defined in the copyright supply table, except that they are here treated as users of products. There are also columns for the other final uses of copyright products by related users, including final consumption (by households and by general government), capital formation (by businesses), and exports to the rest of the world. Each column is subdivided into total intermediate uses and intermediate consumption of copyright.

287. The value-added sub-matrix is placed below the main matrix of producing industries. It records the value added of the copyright industry in the column by the component of value added in the row. Additional rows may be included as necessary to record labor inputs, gross fixed capital formation and stocks of fixed assets.





## 6.2.2.2 Input-Output (I-O) Tables

288. I-O tables are transformed from SUTs and are commodity- or industry-based. Industry-by-industry I-O tables are used for most analytical work. An I-O table comprises industries grouped into I-O sectors according to the economic structure and other criteria specified in the SNA. A simplified outline of a 3-sector I-O table is given below. In its first quadrant (bounded by Total Intermediate Output and Total Intermediate Input), the table shows the production structures of the sectors, that is, the inputs for each sector, in its columns. Conversely, the distribution of output from I-O sectors, that is, the sales of the each sector, is shown in its rows. The first quadrant is a square matrix that depicts the linkages among the industries in the economy. The second quadrant comprises the five sectors of Total Final Demand. Part of the third quadrant contains measures of value added. The other part covers imports and import duties, both of which are continued into the fourth quadrant.

**Table 6.5 An Illustration of an Input-Output Table**

Sector	1	2	3	Total Intermediate Output	PCE	GCE	GFCF	Exports	CS	Total Final Demand	Total Output
1	x	x	x	x	x	x	x	x	x	x	x1
2	x	x	x	x	x	x	x	x	x	x	x2
3	x	x	x	x	x	x	x	x	x	x	x3
Total Intermediate Input	x	x	x	x	x	x	x	x	x	GDP by Final Expenditure	xx
Imports	x	x	x	x	x	x	x	x	x	x	x
Import duties	x	x	x	x	x	x	x	x	x	x	x
Wages & salary	x	x	x	x	0	0	0	0	0	0	x
Operating surplus	x	x	x	x	0	0	0	0	0	0	x
Depreciation	x	x	x	x	0	0	0	0	0	0	x
Indirect taxes (- subsidies)	x	x	x	x	0	0	0	0	0	0	x
Total Value Added	x	x	x	GDP by Value Added	0	0	0	0	0	0	GDP by Value Added
<b>Total Input</b>	<b>x1</b>	<b>x2</b>	<b>x3</b>	<b>xx</b>	<b>x</b>	<b>x</b>	<b>x</b>	<b>x</b>	<b>x</b>	<b>x</b>	<b>XXX</b>

PCE=Private Consumption Expenditure GCE=Government Consumption Expenditure  
GFCF=Gross Fixed Capital Formation CS=Change in Stocks

289. Some notable features of an I-O table are as follows.

- i. A sector's total output is equal to its total input (such as **x1** in both column and row of Sector 1).
- ii. The measure of GDP by the final expenditure approach is reflected as indicated.
- iii. The measure of GDP by value added (output less purchases) is reflected as indicated.
- iv. Total output is equal to total input as indicated by **xx**.
- v. Total supply of goods and services in the economy (i.e. domestic output plus imports) is the grand total output indicated by **xxx**.

290. An I-O table depicts the interdependency among sectors (groups of industries) in the whole economy, so it offers a way of analyzing the economic impact of a change in output in one industry on the rest of the economy. Measures of the direct and indirect requirements from a unit increase in demand are available from a transposed matrix of the intermediate quadrant. The column values of the transposed matrix are the total inputs (direct and indirect) required owing to the backward linkages with the rest of the economy. The sum of values in a column is the multiplier of that sector, that is, the additional output generated from a unit increase in that sector. Multipliers have been adopted as one of the indicators in policy decision-making. For instance, if restrictions on an item were to be applied to reduce consumption, multipliers could provide a source of information about which sector or industry would be most or least affected by a new restriction or quota. Other applications of I-O tables for economic analysis are well documented in research publications.

291. While I-O tables are a rich source of data, the massive effort required to compile an I-O table usually results in a considerable time lag between the reference year of the table and the current year. In an economy undergoing rapid structural changes, this time lag could invalidate some I-O relationships. The I-O sectors are aggregates of industries. For analysis of individual industries, census or survey data are needed. Moreover, an assumption is made that an industry within an I-O sector does not differ significantly in its production structure from that of the sector.

292. Apart from single-economy I-O tables, there are regional and international I-O tables. Regional I-O tables pertain to a region in an economy, such as the state Nevada in the United States. International I-O tables comprise a group of economies linked by trade. Analysis using an international I-O table has, for instance, covered the economic impact of a financial crisis in the United States on nine countries, namely China, Japan, South Korea, Taiwan, Indonesia, Malaysia, the Philippines, Singapore, and Thailand.

#### 6.2.2.3 Grouping Producers

293. In a country where copyright activity is carried out by heterogeneous types of producer, such as self-employed sole proprietors and large-scale international corporations, or even corporations heavily involved in trade, it may be useful, because of their different cost structures and behaviour, to show the groups of producers separately.

294. For the copyright sector, in most countries the situation is quite complex. Many producers are household-based unincorporated enterprises, which do not really qualify as quasi-corporations. The ideal approach would be to create a complete set of copyright accounts for these household companies and their productive activities. These would then be added to the set for the incorporated companies. Since this may be difficult to do in practice, it may be necessary to show only the accounts and transactions which are most closely linked with copyright activity, such as the production and generation of income accounts from one side, and the main transactions of the capital and financial accounts from the other.

295. Annex V provides a sample questionnaire which can be adjusted and used to collect data from unincorporated household enterprises.

#### 6.2.2.4 Distinguishing Public, Foreign and National Private Corporations

296. In compiling accounts for the copyright sector, every effort should be made to distinguish public, foreign-controlled, and national private corporations. Given the interest in measuring trade, it would also be helpful to create special three-way 'from-whom-to-whom?' flow data tables to underpin the calculations needed later. The cell



entries of such a table record how much trade flows from left to right along each row, hence the label ‘from-whom-to-whom’. That is, they show how much is purchased by an operator and from whom, so this type of table concentrates on the purchases and yet shows the relationship between the copyright sector, every other sector, and the rest of the world.

Suppose the copyright sector is labeled A, all other sectors B, and the rest of the world C, and there is one operator in each. Then, a ‘from-whom-to-whom’ flow table has the following form:

	A	B	C	Total Purchases
A		ab	ac	Total Purchases from A (by B and C)
B	ba		bc	Total Purchases from B (by A and C)
C	ca	cb		Total Purchases from C (by A and B)
Total Sales	Total Sales by A	Total Sales by B	Total Sales by C	Overall Balance

297. This type of table provides a simple but comprehensive and manageable picture of the flows linked to the copyright sector. The total purchases from an operator are specified, but the table also gives the total sales of an operator. The column cell totals on the far right show the total purchases from each of the three operators. The row cell totals at the bottom show the total sales by each operator. The total sales and total purchases must be equal.

298. Even if the table does not present the cell details for the sector, it must at least show the totals and ensure that they are balanced. However, when developing accounts of the copyright sector, the details help to understand how the sector really works.

#### 6.2.2.5 Data on the Role of Government

299. In some countries, government plays a major role in the copyright sector. It may be a major source of grant funding for sector activities or even the main owner of key establishments. In such a case, it would be necessary to compile detailed transactions between establishments and the general government, including relevant taxes and subsidies.

300. In this application, it is important to extend the classification of transactions to conduct specific analysis of the flows connected with copyright, including relevant taxes and subsidies on products. These flows may be received by various government-controlled or stakeholder-controlled agencies, such as special-purpose quasi-public agencies, special funds or special accounts. Similarly, the study should seek to detail the uses made by agencies of the funds received. All of these procedures are best handled by adding a row and column for operator G (general government) to the 'from-whom-to-whom' table above.

301. In this *Guide*, certain options have been adopted for conceptual variation from the standard national accounts. They are important for successful data collection.

#### 6.2.2.6 Production and Products – Boundary Extension

302. In the SNA, production units are establishments located in ISIC classes according to their main activities. In the WIPO *Guide*, this rule applies whenever the establishments are homogeneous. When the establishments and industries are not usually homogeneous in any ISIC class, they are deemed to undertake a main activity and a secondary activity. This would be the case for the 'partial copyright' sectors discussed in Chapters 4 and 5. They should generally be handled as follows.

- a) The output of these secondary activities is identified according to its nature, as would be done when classifying a product in the CPC.
- b) The inputs into these secondary activities are not distinguished from those of the main activities. Only the share of the inputs assigned to the secondary activities should be determined.

303. In standard accounts, the other ancillary activities of inhomogeneous industries are usually ignored. However, when setting up the data for such cases in the copyright sector, considering ancillary activities is also informative. This gives a full picture of the inputs corresponding to the activity and could prove important in detecting whether some of these inputs bear copyright.

304. This is a very complex process because all the relevant activities and products do not appear in the standard data sets of national accounts. In this *Guide*, the main





methods of imputation by using copyright factors are specifically designed to address this problem. They are set out below in Section 6.5.

#### 6.2.2.7 Income

305. The preparation of copyright accounts involves an extension of the production boundary beyond that of standard accounts, so the magnitude of primary (factor) incomes also increases. This is because additional income must be imputed for the additional activities that are included in the standard classifications. Care has to be exercised when imputing these incomes.

306. A significant problem is the role of inflation. When present, nominal primary incomes tend to give a false picture because they tend to include an implicit or explicit compensation (or penalty) for the change which inflation causes in the value of assets and liabilities, the wages of work, and the prices of imported inputs. This would apply to interest, wages, own-account deductions for consumption, the value of imported inputs, and the like.

307. If data is available, real values should be used. If suitable data is not available, it is helpful to analyze the inflationary component as a gain or loss, depending on the primary factor being considered. For example, regarding transactions with the financial sector, inflation is a gain for borrowers in the copyright sector and a loss for lenders to the copyright sector.

#### 6.2.2.8 Effective Transfers

308. In many countries, transfers play a major role in the copyright sector. These should be delineated in such cases. If the transfers are implicit, such as through prizes for competitions, they should be made explicit. Implicit transfers change the situation between units without any flow being treated as an imputed transfer in the national accounts.

309. For example, government units may provide a host of free non-market services to market producers in the entertainment sector. In the national accounts, these appear as the collective consumption of government. However, they can also be

treated as an addition to the intermediate consumption of the market producers. In this case, a counterpart would have to be introduced on the side of subsidies for production. Such adjustments would bring clarity to the main foundations on which the copyright sector survives and grows in the economy.

#### 6.2.2.9 Uses of Goods and Services and Functional Classifications – Why are Outlays Incurred?

310. Enlargement of the concept of production also changes the coverage required for the uses of goods and services, either for intermediate or final consumption or for capital formation, as represented in the standard accounts. Because many of the enterprises in copyright are small self-employed artistes and other operators, it is helpful for the researcher to gather data using a precise tool which explores the purpose of the expenditures incurred.

311. It has already been noted that the central question of national accounting is: what are the inputs bought by the establishment? Data is collected accordingly. In copyright accounting, this usually has to change. The central question becomes: why are the outlays incurred by the establishment? It is this shift in focus which allows for the flexibility of the accounting methods recommended in this *Guide*.

312. Perhaps the most important classification of purpose in the context of this *Guide* is the COPP – the Classification of Outlays of Producers by Purpose. The main producer purposes of the COPP are:

- a) outlays on infrastructure;
- b) outlays on research and development, including cultural research and exploration;
- c) outlays on environmental protection;
- d) outlays on marketing;
- e) outlays on human resource development; and
- f) outlays on current production programs, administration, and management.



All of these would be important to various degrees in gathering data for use in assessing whether or not outlays are related to the generation of copyright and related rights, as identified in this *Guide*.

313. This type of expenditure classification is particularly relevant to the copyright activities of small operators based in households. In such cases, the development of the HUEM accounts also means that there might be services rendered to the operators from within the household which are properly included in their production activities. These services would also be part of the final consumption, if the accounts are to balance.

314. The boundaries between intermediate consumption, final consumption, and capital formation can also be beneficially modified when preparing the copyright accounts, especially for small operators. The most important cases are the treatment of human capital and consumer durables. Again, the judgment exercised is properly based on the purpose of the expenditures incurred.

315. In the copyright sector, much of the expenditure on education and health can properly be treated as fixed capital formation, again because of the purposes the investors have in mind. The same is true for the accumulation of knowledge and information from investment in efforts to develop the cultural crossovers and fusions which result in innovations and copyright. The capital assets would then adjust accordingly and consumption of fixed capital would also be extended.

316. Regarding expenditures on consumer durables such as cars, mini-vans, and furniture, these are normally treated as household final consumption in the national accounts. However, they usually play a major role in the creation of copyright even in the most advanced economies. All or some of these expenditures can be appropriately reclassified as fixed capital formation, depending on the local circumstances. Then, the capital services provided by this part of the resulting fixed assets will enter the accounts as final consumption.

317. Taking into account the need to ensure that the National Income and Product Accounts are in balance, a summary table is useful to present the changes required in the classification of expenditures for copyright accounting, and their expected effects on GDP and gross domestic income:

**Table 6.6 Classification Changes and their Expected Effects on GDP and Gross Domestic Income**

Sector	Gross Value Added (GDP at Basic Prices)			Gross Domestic Income	
	Current (SNA 93) Treatment of Copyright-creating Expenditures in GDP	Adjustment Required under 2008 SNA	Likely Impact of Adjustment on GDP	Adjustment to Gross Domestic Income under 2008 SNA	Likely Impact on GDI
Business	Business expenses	Reclassification of copyright-creating expenses to investment	Increase by the value of copyright investment	*Operating surplus grows by amount of investment less related consumption of fixed capital **Consumption of fixed capital grows	Increases by the value of copyright investments
Non-profit Organisations serving household sector	*Personal consumption expenditure **The estimates of GDI include no estimates of returns on non-profit investments	*Copyright-creating expenditures of the non-profits reclassified as investment **Personal consumption expenditures on services grows	*Reclassification causes no GDP growth, since it is just a shift from consumption to investment **Personal consumption expenditure on services increases by the value of capital services, which equals the consumption of fixed capital plus the estimated net return on capital	*Estimation and addition of returns to investment in copyright-capital created **Consumption of fixed capital grows	GDI increases by the value of capital services, which is the sum of depreciation and the net returns on capital
General Government	Government consumption	*Government copyright-creating expenditures reclassified as investment **Government consumption of services grows	*Reclassification causes no GDP growth, since it is just a shift from consumption to investment; **Government consumption expenditure on services increases by the value of capital services, which equals the consumption of fixed capital plus the estimated net return on capital	*Estimation and addition of returns to investment in copyright-capital created **Consumption of fixed capital grows	GDI increases by the value of capital services, which is the sum of depreciation and the net returns on capital

318. All of the above changes also mean that the concept of savings is extended to reflect the larger scale and wider scope of capital accumulation.

#### 6.2.2.10 Assets and Liabilities

319. Once the scope of production and capital formation is extended to fit the needs of the copyright sector, it also becomes necessary to adjust the scope and coverage



of non-financial assets. The associated contingent liabilities and assets can also be included, thereby widening the scope for financial assets to be consistent. These can then be valued at fair market values rather than actual current prices.

#### 6.2.2.11 Supplementary Items

320. The 2008 SNA introduced the idea of supplementary items and tables to refer to items which may be of limited relevance to some countries but are of great importance to others. This is an important issue in the data collection process.

321. Often, a table of these items cannot be prepared to the same degree of accuracy as the main accounts. Many countries will find this an important development in international standards. The process bears a close relationship to satellite accounting methods. The team working on the study should also pay considerable attention to the development of raw materials as a source of intellectual property. In some countries, these developments might have to be analyzed as supplementary items in the sense meant by the 2008 SNA. This could be the most important part of the assessment for some countries.

322. Once issues such as these are addressed and data has been suitably collected, a set of accounts, following the sequence of national accounts as far as possible, may be compiled for the copyright sector.

### 6.2.3 Step Three: Measurement of the Contribution of Copyright Industries to the National Economy

323. This section describes the measurements applied to the three main indicators – value added, employment, and foreign trade. The focus here is on how to apply the framework described in Chapter 5 in more practical statistical terms.

324. Even though the WIPO method adjusts and extends the scale and scope of many industries and expenditures in standard national accounts to fit the production and use of copyright, the overall meaning and measure of value added does not change because both output and intermediate consumption increase by the same

amount; a more inclusive picture of the role of copyright in the economy, however, is obtained.

#### 6.2.3.1 Measurement of Value Added

325. In assessing the economic contribution of an industry, the most common measurement is value added.<sup>134</sup> The methods for establishing the value added by a productive economic activity are explained in detail in the System of National Accounts (SNA) 1993.<sup>135</sup> These methods are used mainly by national statistical agencies in the process of compiling and processing data for their own national accounts systems.<sup>136</sup>

#### 6.2.3.2 Composition of Value Added

326. The calculation of value added for all activities, including the copyright-based ones, can be made in two ways:

- a) Gross Value Added (basic prices) = output minus intermediate consumption; and
- b) Value added = operating surplus/mixed income plus compensation of employees plus consumption of fixed capital plus other taxes on production minus other subsidies on production.

327. In the two approaches, the following definitions and understandings are applied.

- a) Output consists of those goods or services which are produced within an establishment and which become available for use outside that establishment.<sup>137</sup> It is measured at basic prices. The value of output is the value of the total sales or other uses of goods or services produced as outputs plus the value of changes of inventories of goods produced as outputs.<sup>138</sup>
- b) Intermediate consumption is the value of the goods and services consumed as inputs by a process of production, excluding fixed assets, whose consumption is recorded as consumption of fixed capital.<sup>139</sup> The boundary between intermediate consumption and value added is not a rigid one and



is influenced not only by the technology, but also by the organization and distribution of production.

- c) Operating surplus/mixed income is the surplus or deficit accruing from production before account is taken of any interest, rent, or similar charges payable on financial or tangible non-produced assets borrowed or rented by the enterprise, or any interest, rent, or similar receipts receivable on financial or tangible non-produced assets owned by the enterprise.<sup>140</sup> The distinction between operating surplus and mixed income depends on the type of enterprise.
- d) Compensation of employees is the total remuneration, in cash or in kind, payable by an enterprise to employees in return for work done by the employees during the accounting period. It does not include any taxes payable by an employer on the wage and salary bill; these are treated as taxes on production. Compensation of employees has two main components: (a) wages and salaries payable in cash or in kind; and (b) the value of the social contributions payable by employers. These may be actual social contributions payable by employers to social security schemes or to private funded social insurance schemes to secure social benefits for their employees or imputed social contributions by employers providing unfunded social benefits.<sup>141</sup>
- e) Consumption of fixed capital is a cost of production. It represents the reduction in the value of the fixed assets used in production during the accounting period resulting from physical deterioration, normal obsolescence, or normal accidental damage. It covers both tangible fixed assets and intangible fixed assets such as mineral exploration costs and software. The value of a fixed asset depends on the benefits which can be expected from using it in production over the remainder of its service life. This value is given by the present discounted value, calculated at the average prices of the period, of the stream of rentals which the owner of a fixed asset could expect if it were rented out to producers over the remainder of its service life. Consumption of fixed capital is then measured by the proportionate decline in this value between the beginning and end of the accounting period.<sup>142</sup> The 2008 SNA indicates that there may be a need to refer here to the amortization of intellectual property products. This value

is of particular relevance to the economic depreciation of an intellectual property asset over its productive lifespan. The value is usually featured in business accounts, but is normally erroneously excluded from the estimation of the consumption of fixed capital, since it is shown separate from other asset depreciation.

- f) Indirect taxes are taxes which can be passed on, in whole or in part, to other institutional units by increasing the prices of the goods or services sold. However, according to the SNA, these taxes should be specifically identified by their purpose: taxes on products<sup>143</sup> and other taxes on production.
- g) Subsidies are current unrequited payments which government units, including non-resident government units, make to enterprises on the basis of the levels of their production activities, or the quantities or values of the goods or services which they produce sell or import.<sup>144</sup> Other subsidies on production consist of subsidies, except subsidies on products, which resident enterprises may receive as a consequence of engaging in production.

#### 6.2.3.3 Data on Value Added

328. Having defined the WIPO categories and the matching ISIC activities, it is necessary to identify data that is relevant to the calculation of value added. Such data may not be directly available. It is necessary to explore first the data available on ISIC activities from national statistical sources.

329. Once official sources have been exhausted with regard to the categories necessary for the calculation of value added, the grey and blank areas should be identified and estimates made for them. At this point, other available sources should be explored. It should be kept in mind that the calculation of value added cannot be addressed before the total output of an industry has been established.

330. Experience has shown that the compilation and processing of statistical data on value added can be described as broadly comprising five stages (see below).<sup>145</sup> This sequence is one way of dealing with the data on value added.





- (1) Compile statistical data  
↓
- (2) Use sampling survey to complete data  
↓
- (3) Correct statistical data  
↓
- (4) Establish output  
↓
- (5) Calculate value added against output

#### 6.2.3.4 Calculation of Value Added

331. To establish the value added for specific economic activities, data that allows the cost structure to be analyzed is needed. Many of the economic activities which are classified under copyright-based industries in this *Guide* are located in the manufacturing sector and the service sector. Against this background, two approaches are recommended in the System of National Accounts with regard to statistics for goods and services: the output (production) approach and the income approach (see also Section 5.3.1). Both can be employed depending on the availability of data and the organization of national statistics.

##### **A. The Output Approach**

332. According to the output (production) approach, value added can be calculated with the following formula:

$$\text{Value added} = \text{output} - \text{intermediate consumption}$$

333. Details of the data needed to calculate value added are illustrated below in Table 6.7.

**Table 6.7 Data for Calculation of Value Added**

Item to be Measured	Operation	Data Needed
Gross Output	equals	Value of goods and services sold
	Plus	Own account capital formation
	Plus	Changes in inventories of
		Work-in-progress
		Finished goods
Intermediate Consumption	equals	Raw and processed materials used, packaging materials used
	Plus	Fuel expenses, electricity costs
	Plus	Sales and general administration expenses
	Plus	Transportation costs
	Plus	Rentals of buildings, machinery, and equipment
	Plus	Accommodation
	Plus	Advertising and sales promotion
	Plus	Payments
	Plus	Sub-contract work
	Plus	Ordinary maintenance and repairs
Operating Expenses	equals	Labor Payments
	Plus	Intermediate consumption
	Plus	Depreciation expenses
	Plus	Taxes on products, taxes on production, rates, license fees, etc.
Depreciation Expenses	equals	Fixed assets (valued at current prices) x depreciation cost rate
		In the 2008 SNA, depreciation is calculated using current prices of fixed assets, not their historic costs when purchased. The Perpetual Inventory Method (PIM) is recommended.

334. Notice that intermediate consumption is a monetary value of the total amount of goods and services used by establishments in producing output. It covers all raw materials, services, and other operating expenses.

335. The output approach is the preferred method in many countries. It presents GDP from the production side, which is the total value of whatever was produced by the various activities covered by the ISIC. On the national scale, it is necessary to look for such indicators as those enumerated in Table 6.1.

336. Preparation of data consistent with Table 6.5 should take account of the adjustments suggested in the above table on 'Classification Changes and their Expected Effects on GDP and Gross Domestic Income'.

### B. The Income Approach

337. The income approach measures value added by measuring its component income claims, which is to say the components represented in the generation of the income account.<sup>146, 147</sup> Value added can be calculated using the following formula:

$$\text{Value added}^{148} = \text{Compensation of employees plus operating surplus/mixed income}^{149} \text{ plus consumption of fixed capital plus other taxes on production minus other subsidies on production}$$

338. The income aggregates can be obtained from the following data.

- Compensation of employees -> wages and salaries plus social contributions.
- Operating surplus -> gross output minus cost of goods sold and sales and general expenses.
- Consumption of fixed capital -> write-offs of tangible fixed assets plus depreciation of tangible fixed assets; or stock of fixed assets x depreciation coefficients; or adjusted bookkeeping depreciation.
- Other taxes on production -> output x tax rate; adjusted government budget revenues from taxes.
- Other subsidies -> subsidies on production; financing from government.

Table 6.8 organizes this information, defining each term and showing what indicators are to be used to estimate the income components.

**Table 6.8 Indicators of the Income Components of Value Added**

	Components	Operation	Data needed (formula)
Value added	Compensation of employees	equal	Wages and salaries plus social contributions
	Operating surplus (operating profit plus mixed income <sup>150</sup> )	equals	Output minus operating expenses (labor payments, intermediate consumption, including sales and general admin expenses and production taxes)
	Consumption of fixed capital	equals	Write-offs of tangible fixed assets plus depreciation of tangible fixed assets
	Other taxes on production	equals	Taxes on products plus other taxes on production
	Other subsidies on production <sup>151</sup>		Subsidies on products plus other subsidies on production

339. Preparation of data consistent with this table should also take account of the adjustments suggested in the above table on 'Classification Changes and their Expected Effects on GDP and Gross Domestic Income'.

340. The income approach allows an alternative calculation of value added whereby the value added is represented as the sum of incomes accruing to the main production factors: capital and labor. The income approach is particularly useful when surveying non-market activities, such as the activities of government. The income-based calculation of value added can sometimes more accurately establish the contribution of specific industries. This method has been applied predominantly to goods in some copyright sector studies.<sup>152</sup>

341. The categories it is necessary to look for may be referred to using different terminology with regard to: compensation of employees, proprietor's income with inventory valuation and capital consumption adjustments, rental income of persons with capital consumption adjustment, corporate profits with inventory valuation and capital consumption adjustments, net interests, business transfer payments, indirect business taxes and non-tax liabilities, capital consumption allowances with capital consumption adjustments, etc.

342. In economies in which a large share of the capital used is also imported, an attempt to distinguish the use of capital imported from the use of capital produced in the local economy could help the efforts to measure copyright. The composition of capital in this sense is likely to have a bearing on the valuation, scale, and importance of copyright to the economy and trade; on the treatment and costing of intermediates; and on productivity growth.

#### 6.2.3.5 Imputing Key Components, Copyright Factors

343. In some cases, there may be no data from which to produce indicators that correspond to some of those needed by the approaches defined above. In this situation, the analyst must produce reasonable imputations. What is to be done depends on the alternative data sources available. Whatever method is used should be highlighted and explained when presenting the findings of the study.

344. Some product groups, which is to say some CPC product codes, contain distinctive lists of products which bear copyright in the same grouping as other listed products which are not copyright-related. These must be separated. Since there will be only one value for the whole group or code with all its listed items, a factor

is needed to share the total value of that product code between the part which is copyright-related and the part which is not.

345. Additionally, of those products identified as copyright-related, not all aspects of the products, and hence not all of their value, may be related to copyright. For example, not all of the value of gold jewelry is copyright-related, only the artistic aspects. Here too a factor is needed to apportion the value which is due to copyright and the value which is not.

346. From the perspective of activities, in analyzing any copyright industry, the general question is whether or not all the products of an activity identified in an ISIC code are copyright products. The problem is how to determine the activity codes whose products cannot be fully attributed to copyright and how to identify the portion which can be considered to be attributable to copyright.

347. In addressing these problems, it is necessary to consider the extent of the homogeneity of inputs, processes, and technology within the ISIC class. This is one of the main strengths of satellite accounting. It should be remembered that the ISIC code is the main concern of the SNA and the products are separated for copyright (satellite) accounting purposes by whether or not the inputs into the production process and the technology used in transforming inputs into output lead to the creation of copyright in some cases. If so, the analyst should examine what detailed cost information is available in order to share the costs between the products, and hence share the value between them.

348. If a survey is used to collect data to answer the general question, then the questionnaire must seek suitable details to distinguish inputs, processes, and costs for the products that are being considered under the relevant ISIC code.

349. This situation is related to the problem of detailed coverage and to the representativeness of the survey. It concerns the survey's inclusiveness and whether what is excluded is done so at random. The concept of introducing weights (or factors) reduces these uncertainties to an acceptable minimum. The survey must be designed to bring the fractions identified as close as possible to the actual copyright share. The identified portion of a specific industry which can be attributed to copyright and the level of dependence on copyright are referred to in some surveys as the copyright factor.

350. The weighting process represents the establishment of the proportion of the copyright-related components of an industry. It must be done in relation to all industries which are not core copyright industries – for core copyright industries, the contribution is counted as 100 per cent. More effort should be applied to measuring the interdependent copyright industries because their contribution is usually significantly bigger than that of the partial and non-dedicated support industries. The measurement techniques have an important cost aspect and, if the budget of the survey allows it, adequate time should be dedicated to studying all the industries which are part of the non-core groups. The weighting process has been a major challenge in many country studies and demands that research teams be creative in finding workable solutions.

351. The weights have to be applied before adding the portions of the value added, employment, or foreign trade attributed to copyright to the other contributions of the core copyright industries. To obtain the overall contribution of all industries, the copyright-related value added, employment, and foreign trade of each industry are then totalled.

352. When establishing the copyright factors, the weighting should reflect the structure, organization, and logic of an economic activity. This means that, once established, the weighting could be used in subsequent surveys, unless: significant changes have occurred in this particular industry over time; new relevant laws have been passed; or the industry has been reorganized with subsequent changes of industry definitions. So, once weightings are already established, they can be used to update subsequent studies.

353. Studies have shown that, in relation to the interdependent copyright industries, there is no need to make major additional efforts if statistics are sufficiently disaggregated. In many developing countries, these statistics are not collected to the desired level of detail and additional work is required to establish copyright factors.

#### 6.2.3.6 Use of Sampling to Obtain Data for the Copyright Factors

354. Sampling is a technique that is widely used in the surveys. It often involves carrying out specific interviews or sending out questionnaires. With such an approach, it is necessary to identify within each sector a number of companies or

establishments (five or more, depending on the industry size) who will form the sample.<sup>153</sup> This sample has to be representative, that is, it should include large, medium, and small companies. The interviews with the units in the sample should be conducted with, or questionnaires sent out to, experts who are responsible for the overall functioning of the companies. Through the interviews or questionnaires in the sample, the aim is to establish such elements as resources spent on copyright payments; the number of employees (full-time or part-time) assigned to the creative field; the share of sales dependent on copyright; organizational units charged with creative tasks or handling copyright aspects; future trends and the positioning of the business regarding each category of products; and the company's own estimation of the dependence of the company's output on copyright.<sup>154</sup>

355. The questions have to be specific to the industry group studied and to the measurement indicator (that is, they may be different when establishing value added, employment, and foreign trade). The percentages are then averaged for each sector. The result may represent a basis to be used for a number of years. Examples of the questions are contained in Annex V of the *Guide*, 'Checklist of Items to be Addressed When Undertaking a Sample Analysis'. The annex highlights indispensable and additional information which should be targeted in order to obtain relevant information. The main problem with a sampling analysis is that it is costly and time-consuming. Therefore, it is recommended that questionnaire be limited to issues which are easy to report.

356. In the complete absence or unavailability of data in certain categories, assumptions or estimates could be used, although, inevitably, this method can affect reliability. One way of dealing with this is to describe the assumptions in full. Some studies have explicitly listed the assumptions made. Such assumptions would imply the introduction of assumption coefficients, which would reflect in general the logic established in drawing up the list of the industries according to the main criterion – the level of dependence on copyright. When applying this approach, it is recommended that the contribution of the whole group of non-core industries be underestimated rather than overestimated.

357. In some of the studies where distribution industries have been identified separately (such as the United States study), the following weighting has been applied: a ratio has been calculated using the sum of the value added for all other copyright-based industries (core, interdependent, and partial) to GDP, less the

transportation and trade sectors. This weighting is built on the assumption that the proportionate contribution of the copyright-based industries to the total distribution industry value added (transportation and trade sectors) is the same as the percentage contribution of the copyright industries to the total non-distribution industries. Consequently, the weighting applied to the distribution industries would vary each year according to the relative contribution of the copyright-based industries in the other sectors of the economy.<sup>155</sup>

#### 6.2.3.7 Procedure for Establishing Copyright Factors in the Interdependent Copyright Industries

358. As the interdependent copyright industries facilitate the production of core copyright industries, they could be considered as inputs to core copyright output. For countries with I-O tables, the inputs to core copyright industry could be extracted and the percentage of each interdependent copyright industry calculated. Taking the example of the paper industry, the steps are:

- a) From the paper I-O sector row, extract the sales of paper to the I-O sectors comprising core copyright industries.
- b) Where the I-O sectors comprise both core copyright industries and other industries, calculate the share of copyright in the sector. Adjust the paper inputs by this share.
- c) Where the paper industry is part of an I-O sector, calculate the share of paper in the I-O sector. Estimate the output of paper.
- d) Estimate the share of paper output going to core copyright industries. That is the sum of paper inputs in core copyright industries as derived in (b) divided by the paper output derived in (c).

For countries without I-O tables, a sample survey of core copyright industries could be carried out to obtain information about their purchases from interdependent copyright industries. Estimates of total purchases of core copyright industries from each interdependent copyright industry provide the copyright factor.





#### 6.2.3.8 Procedure for establishing copyright factors in the partial copyright industries

359. Based on the survey questionnaire in the Annex, the copyright factors could be derived as follows:

1. Calculate for each industry the following statistics from the responses to each survey question:
  - a) The percentage of firms with answers 1-3, that is, the responses very significant, significant, and slightly significant.
  - b) The average of the responses from answers 1-4, weighted by size of firm.
  - c) The copyright factor is based on assigned values to the answers. For instance, answers 1-4 could be assigned copyright factors of 50 per cent to 1 per cent, based on other relevant studies. The average value in (b) is converted according to the range of assigned copyright values. That is, if the average is 1, the copyright factor will be 50 per cent.
  - d) The percentage of firms with IP expenditure or revenue.
  - e) The average and range of percentage of IP expenditure in total expenditure.
  - f) The average and range of percentage of turnover attributable to creative activities.
  - g) The average percentages of creative workers in full-time employment and in part-time employment respectively.
  - h) The average percentages of firms with full-time creative workers and part-time creative workers respectively.

2. Tabulate the statistics and examine them for consistency between the estimated copyright factors from (c) and the other statistics.
3. In case of inconsistency, adjust the copyright factors by testing with other assigned values to the significant responses.
4. Alternatively, use a weighted (by firm size) average of the percentage of creative expenditure and the percentage of creative revenue in total expenditure and total revenue respectively as a proxy for the copyright factor. Another method is to rank the industries by each of the statistics, sum up the ranks, determine copyright factor values to the highest and lowest ranks, and interpolate for the rest.

#### 6.2.3.9 Procedure for establishing copyright factors in the non-dedicated support industries

360. 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:

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

Where d = dedicated distribution industries and

D = the three Non-Dedicated Support Industries

361. In summary, the procedure for establishing the weightings combines several approaches and techniques and includes the following stages:

- analyzing the components which make up each sector and the scale of activity associated with each component;
- taking account of the ratios used in previous national studies or comparable research done elsewhere; and
- consulting with representatives of the industries concerned (interviews and questionnaires).



### 6.2.3.10 Estimating Copyright Factors Using Data from Comparable Countries

362. In the absence of local survey data, international comparisons can be an important source of information. These can be applied to countries with similar legal frameworks, industry structures, production practices, working conditions, or other economically significant factors. A number of limitations are typical for this approach. For example, the assumption implies a similarity of production, consumption patterns, and productivity levels in branches and sub-branches. It may also be difficult to adjust data if important information is missing.<sup>156</sup> In a number of cases, the use of copyright factors elaborated by other countries has not been based on a developed analytical framework. A good example of the creative use of this approach is presented in the Singapore study.<sup>157</sup>

The following practical considerations should be borne in mind when establishing copyright factors from data for other countries:

1. As used in the *Guide*, a copyright factor is an estimate of the proportion of the copyright-based component of the inputs or outputs of an industry or sector, or of trade in goods or services. Such estimates are needed when an industry is not a core copyright-based industries for which the contribution of copyright will be counted as 100%. They are also needed when data is not generally available in a country or when economic accounting data is only available for aggregated sectors that are not the same as the copyright sectors defined in this *Guide*.
2. It is repeated for emphasis that copyright factors are best estimated with survey data and many of the studies report them along with the survey methods used. For example, large and expensive surveys are needed to develop the input-output methods of estimation of copyright factors. However, survey data collection is expensive and is often not available to the analyst. Other methods of estimation are needed in situations in which direct survey are not available to estimate:
  - a) the share of copyright in the intermediate goods and services of an industry;
  - b) the share of the factor inputs of an industry; and
  - c) the share of copyright outputs of an industry.

3. A copyright factor reflects the structure, organization, and logic of an industry. Once established, the factor could be used in subsequent surveys, unless significant changes have occurred in this particular industry over time, new relevant laws have been passed, or new organization of the industry has occurred, with subsequent changes to industry definitions.
4. Studies done on comparisons with other countries can be an important source of information when confronted with missing data or when seeking to check the quality of the available data. Specifically, the factors estimated for another country can be applied if it can be established that the country has a similar legal framework, industry structure, production practice, productivity, working conditions, consumption patterns, or other economically significant factors.

#### 6.2.3.11 The Basic Principle of Proportionality

363. When estimating copyright factors with data from other countries, research teams must be creative in studying the country data and finding workable solutions based on the principle of proportionality. Here are some suggestions that assume that a comparable country has industry-level data and information on applicable copyright factors.

364. As a general guide, let  $y_{ur}$  be the value-added of the industry in the country without reliable data, seeking to estimate copyright factors. Let  $y_r$  be the value-added in the corresponding industry of the country with reliable data. An appropriate assumption that can be used is that the copyright contribution of the industry in the country with reliable data is proportional to the value-added of the industry. Let  $b$  be the proportion of copyright in the value-added of the corresponding industry of the country with reliable data. Assume that in that country study, it has been estimated that:

1.  $cr = by_r$

For the comparable country without reliable data, it is then assumed that the same proportionality factor holds, so that:

$$2. \quad cur = byur$$

Thus, since  $b$  is known from the reliable country, and  $yur$  is known from the unreliable country, the copyright contribution for the unreliable country is estimated by  $cur$ .

#### 6.2.3.12 Using Data from More than One Similar Industry

365. If the research team is in doubt, it is perhaps useful to use a weighted average of the  $b$  values estimated for several similar industries in the country with the reliable and comparable data. In that case, the best approach is to compute the weighted average using the value-added of the industries as weight, since value-added is usually estimated with known reliability from survey data. Let  $yri, i=1..n$  be the comparable industries for which data and copyright factors are available. A reasonable average copyright factor can be derived as:

$$3. \quad b = \frac{yr1b1 + yr2b2 + \dots + yrnbn}{nyri}$$

#### 6.2.3.13 Using Data from More than One Similar Country

366. A study might choose to use reliable and valid copyright factors from two similar countries to fill in data that was missing for a country with unreliable information. Let  $bc1$  and  $bc2$  be reliable and valid copyright factors estimated for two countries with data. A useful strategy is to use a conservative average, such as a geometric mean, which gives greater weight to the smaller factors in the set adopted. Thus:

$$4. \quad b = bc1bc2$$

### 6.2.4 Step Four: Analysis and Presentation of the Survey Results

367. A major task of the survey is presenting its findings. It is important that the findings are based on sound facts and that the conclusions derived from them

are therefore credible. The findings in the survey should serve the following main objectives:

- a) raising awareness of the importance and real contribution of the copyright-based industries;
  - b) positioning the copyright-based industries in the context of the national economy by calculating their share of GDP and contributions to employment and foreign trade;
  - c) comparing the results with surveys on the copyright-based industries in other countries which are important trading partners; and
  - d) adjusting national legislative practices (such as copyright enforcement regimes) and statistical practices (such as introducing satellite accounts for copyright-related statistics), and adapting trade, economic, and public policies (such as subsidies, infrastructure development, and facilities for creators) to the results of the findings.
368. With regard to the analysis of content, the study should generally seek to:
- a) state clearly the trends observed and illustrate them with comparisons over time, especially if they build on past research;
  - b) illustrate the dynamics in the copyright-based industries by indicating the growth rates in the various categories measured;
  - c) observe developments in the different industry groups and highlight important markets which may have not been treated with due attention;
  - d) highlight in economic terms contributions which can be attributed to cultural workers;
  - e) demonstrate the contributions of the copyright-based industries in fields where such contributions have traditionally been overlooked;<sup>158</sup>
  - f) indicate the type of sources, methods, and approaches used, pointing to the reasons for choosing them in the study and to the interpretations and approximations used; and



- g) explain adjustments which have been made with regard to specific economic activities, including aggregations or omissions or different groupings.

369. For the presentation of statistics, the study should include the following.

- a) Create tables and diagrams for the data used and collected. These tables could provide useful information with regard to issues such as: the relation between value added and output; the growth and contribution per industry group and sector as compared to the entire economy; the methods applied to the analysis of different groups of industries and indicators; industry class correspondence; the scale of the market occupied by the industries and related increases; terminology adjustments; comparisons with contributions from other industries; information on nominal and real values; and the references used.
- b) Aggregate spreadsheets are recommended. These could be filled as the work on the compilation of data progresses. Once an indicator is established, it should be entered into the spreadsheet so that work can focus on the blanks in the table and the problem-solving methods. For various reasons, it may be better not to include the detailed findings for all industries in the final presentation, and instead to use just the aggregate figures.<sup>159</sup>
- c) Provide details of the sources used under the different headings. This could contribute to the clarity and justification of the presented analysis. It is advised that the survey be anchored in official statistics as much as possible to ensure reliability and regular implementation. The survey must be performed in close cooperation with the national statistical office, which can supply information and provide important methodological clarifications and advice, including indispensable support for future studies.
- d) Write an executive summary of the survey. This is always an important part of a survey and is particularly useful for awareness purposes. However, it does not diminish the importance of publishing the more comprehensive research findings. This approach could add to the survey's credibility and facilitate international comparisons and the exchange of experiences. It is particularly important to present the survey methodology that was adopted in cases where research in this field is being undertaken for the first time.

## 6.2.4.1 Expected Deliverables at Each Step of the Survey

370. When preparing the survey, it is important to be clear about what steps are to be undertaken and what results are expected at every step. The following table (Table 6.9) could be useful in determining how the study is progressing.

**Table 6.9 Steps in the Survey and Expected Deliverables**

Steps	Step 1 Identification and classification of industries	Step 2 Collection of data	Step3 Measurement of the contribution of the specific industries	Step 4 Analysis and presentation of the results
Main elements	Set up the research team	Identify relevant official statistics by industry group	Decide on the method for each industry/indicator	Analyze main trends and tendencies
	Check copyright legislation	Identify blank areas	Establish outputs by industry	Prepare comparisons
	Analyze copyright chain	Collect additional specific statistics	Adjustment of data	Finalize spreadsheets, presentation tables, and diagrams
	Verify ISIC codes correspondence	Questionnaires/ interviews/ surveys	Establish weights	
		Complete data	Establish value added, share of employment, and foreign sales	
Deliverables	Table of the industries to be studied; industry code references established	Reliable desegregated data compiled	Contribution to value added, employment, and foreign trade established	Survey of the contribution of copyright industries to the national economy



## CHAPTER 7

### INFORMATION RESOURCES

371. This chapter looks at information resources that can be used to conduct studies on the contribution of the copyright-based industries to GDP. It also considers the limitations of the data and future trends in the development of information resources.

372. The availability of appropriate information has a direct impact on the choice of methods for implementing the study, its scope, and its credibility. Experts in national statistics can bring substantial added value to the research team and are an indispensable part of it.

373. Careful planning is needed when identifying and working with a large number of information resources. Ensuring credibility can be a time- and energy-consuming part of any study that is based primarily, but not exclusively, on official statistics. While supplementary statistics will inevitably be needed, it should be kept in mind that some of them will be purely indicative in character.

374. Data on the contribution of the copyright-based industries will not always be directly available. Hence, particular attention should be given to working in close cooperation with the national statistical organization and specific professional groups and trade associations. This will enable analysts to work their way through some of the gray areas.

375. The issue of the study's credibility may be addressed by providing transparent information on the information resources used and the statistical methods applied. Metadata should be provided for statistics reported in relation to definitions and the inclusion or exclusion of certain categories. This needs to be fully explained in the study.

#### 7.1 Scope of Information Resources

376. Information resources can broadly be divided into two groups: official and supplementary statistics.

### 7.1.1 Official Statistics

377. Official statistics are the basis of all national surveys. They provide direct figures on the indicators surveyed and constitute the main source for indirect calculations or estimates.

378. 'Official statistics' include data and metadata as well as statistical tables and publications prepared or approved by the national statistical organization or other agencies working under national law to collect, analyze, and disseminate national or international statistical information.

379. Official statistics have a number of advantages, such as:

- consistency and methodological coherence with international standards, which facilitate comparisons across countries;
- regularity and predictability of publication intervals;
- reliability and credibility of the data revealed; and
- reduced costs by limiting the extent to which data must be collected through primary data collection exercises.

380. Along with these advantages, official statistics may have a number of disadvantages such as:

- limited scale and scope of national statistics given their dependence on government priorities and budgetary resources, which can influence the character of the data obtained and the extent of the statistics' disaggregation;
- vulnerability to long intervals in the production and release of data, statistical tables, and publications in countries that suffer significant resource limitations; and
- vulnerability to relatively long transition periods for adapting national statistical standards to international standards and difficulty in establishing the exact stage of implementation of these standards at the national level.
- Among official statistics the following three types of resource can be distinguished: national, regional, and international statistics.



#### 7.1.1.1 National Statistics

381. Among the official national statistical publications, the following are of particular relevance to any study on the copyright-based industries:

##### **A. National Accounts**

382. National accounts provide a comprehensive set of information on the production of value added, the inputs used, and the disposal of value added.

383. The most valuable information is contained in supply and use tables and in any related input-output tables, where they are produced. These tables represent a framework for weighting and compiling index numbers and play central roles in the production account and in the goods and services account of the national accounting framework.<sup>160</sup>

384. National accounts are a major source of industry-specific value added data and also of information on employment and trade. They provide recent data according to common international standards based on the methodology developed in the System of National Accounts (SNA).

385. National accounts offer a coherent, consistent, and integrated set of macroeconomic accounts, balance sheets, and tables where they are compiled according to the recommendations of the SNA and in particular to its set of internationally-agreed concepts, definitions, classifications, and accounting rules.

386. Practical guidance on the implementation of the SNA methodology can be found in the handbook of national accounting.<sup>161</sup> The most recent version of the methodology is the 2008 SNA referred to in Chapter 6.

##### **B. Statistics from Monetary Authorities**

387. Monetary authorities also produce a significant set of data that is a good source of information for compiling estimates of the contribution of copyright to the economy.

388. Among the statistics normally reported are balance of payments, specifically including details on the balance of visible trade; trade in services, including services

provided in relation to intellectual property; and financial flows (in-payments and out-payments).

### **C. Labor Statistics**

389. Labor statistics cover data on employment, unemployment, and labor force participation. In most countries, these are produced quite regularly and in an internationally recognized format for industry, age, and gender. The time intervals and the degree of available detail vary considerably across countries and regions depending on the size of the informal labor market.

390. The international standards for the preparation of labor statistics are established by the International Labour Organization (ILO) through the International Conference of Labour Statisticians. The standards contain classifications, concepts, and methodologies, including methods of arriving at policy on employment standards.<sup>162</sup>

391. The ILO classifications include occupations and employment status. These are part of the international family of social and economic classifications.

- a) International Standard Classification of Occupations (ISCO)
- b) International Classification of Status in Employment (ICSE)

392. Many WIPO industry groups can be found in the ILO occupational (ISCO) categories. Care should be exercised in interpreting these specific WIPO industry groups.

### **D. Special Sector Studies, Administrative Data, and Other Official Statistics**

393. National statistical organizations usually try to monitor up-to-date trends in different sectors of industries, especially new and fast-growing sectors. For example, statistical offices in many countries might have recently reviewed the industries related to software, the Internet, the computer market, and other information industries and might have provided updated and in-depth information.

394. The information provided for a sector may include sector indexes, very recent data, correlation with other industries, positions of special groups and professions, etc.



395. Cultural statistics publications and foreign trade statistics deserve special attention.<sup>163</sup>

396. All of these sector statistics may be useful in developing estimates of the contribution of the copyright-based sectors and should be carefully examined for any useful insights they may contain.

397. In some countries, specific government agencies and other administrative bodies may be entrusted to monitor specific sectors such as culture, mass media, information, trade and industry, etc. Their publications sometimes provide useful statistical details. For example, official financial statement statistics are available in the framework of activities undertaken or reported by the Ministry of Finance.

#### 7.1.1.2 Regional and International Statistics

398. Other relevant information can be found in regional statistical publications. They can provide the basis for regional comparisons and supply information on indicators important to the study. Examples of regional statistics are those produced by the European Union (EU), the Organization of Economic Cooperation and Development (OECD), the Caribbean Community and Common Market (CARICOM), and Nordcom, sponsored by the Nordic Council of Ministers.

399. In some regions, specific standards have been developed for the organization of statistics in the member countries of the region. A typical example is the European System of Accounts and the General Industrial Classification of Economic Activities (NACE), which are followed by the member states of the European Union and are being implemented by the countries preparing for membership in the EU. NACE contains disaggregated classes which could be very helpful for surveying copyright-based industries.<sup>164</sup> The European System of Accounts is compatible with ISIC. Statistics on the member states of the European Union are provided by the Statistical Office of the European Communities, Eurostat.<sup>165</sup> In North America, the North American Industry Classification System (NAICS) is gradually being introduced, which involves structural changes in the organization of statistics.

400. Another source of official statistics is the publications of international organizations.<sup>166</sup> International organizations produce publications that provide a basis

for international comparison. For example, UNESCO offers global and internationally comparable statistics on education, science, technology, culture, and communication on an annual basis,<sup>167</sup> including statistics on trade in cultural goods.

401. International databases are available on a regional and universal basis. The United Nations Statistical Division now produces a very useful and internationally comparable set of macroeconomic and sector data for most countries. The data are based on countries' official statistics and the databases of all sister UN agencies. They run from 1970 to 2011 or later and are updated regularly. They could be a good starting point for analysts studying the copyright sector.

402. The World Trade Organization (WTO) produces international trade statistics, focusing on merchandise and commercial services.<sup>168</sup> The United Nations' statistical publications,<sup>169</sup> the World Bank, and the International Monetary Fund (IMF) are also useful sources.

403. Data on trade in services are typically difficult to obtain. The International Trade Centre (ITC) produces a Trade Map which provides trade data in an accessible, user-friendly, and web-based format which is valuable to analysts investigating the contribution of the copyright sector to trade.<sup>170</sup> The Trade Map contains annual trade data for 220 countries and territories and 5,300 products at the six-digit level of the Harmonized System. It is derived from the United Nations Commodity Trade Statistics Database (UNCOMTRADE) and directly from countries' official statistics. Trade Map data on imports and exports is supplied by product group, which includes services, and by country.

404. The Trade Map can be particularly useful for acquiring trade data where trading partners are at different levels of development and sophistication in their capture of trade flows. The tool provides mirror data: data on a country's exports of a copyrighted product, for example, might not be reported in its export data, but it might still be reported in the import data of a trading partner. So, an analyst is able to obtain data on imports going into a country by referring to the export data of its trading partners for the relevant products and services. Export data can be captured in the same way by referring to the import data of a country's trading partners.

405. It should be borne in mind that mirror data is not as robust a source of information as direct data and should be used only when direct data is not available.



Gaps in data still exist in the Trade Map, particularly on trade in services, but these are being actively addressed, and the Trade Map is becoming an increasingly useful tool for measuring trade in the copyright sector.

406. The specific international database appropriate for the country being surveyed should be identified individually.

407. In using all of these data sources, the analyst should pay close attention to the metadata supplied with the numerical indicators.

### 7.1.2 Supplementary Statistics

408. Supplementary statistics will likely also have to be consulted in addition to official statistics. It is necessary to properly assess the underlying methodologies of supplementary statistics, the time frames covered, and other such matters when determining their suitability for measuring copyright-based output. It must be kept in mind that supplementary statistics may be purely indicative in character. For this reason, close attention should also be paid to associated metadata, where available.

409. Three supplementary sources have been identified:

1. national professional organizations;
2. specific industry sources; and
3. non-governmental organizations and special interest groups.

### 7.1.3 National Professional Organizations

410. These sources may include publications by professional associations or interest groups, such as national organizations of the arts, copyright collecting societies, copyright federations, writers' unions, music publishers' associations, performers' unions, employers' associations, and branch organizations of various industries, for example, the media sector, the cable industry, retailers, associations of the software industry, the recording industry, libraries, museums, broadcasters, etc.

411. This information may sometimes be the only source that captures the activities of freelancers, independent artists, composers, and writers, especially with regard to people who operate in several professions or do not appear separately in any statistics. The information is often organized in annual or special reports. Collection is a demanding task, and inconsistencies can occur in official sources.

#### 7.1.4 Specific Industry Sources

412. Industry statistics often provide detailed information on foreign sales at the wholesale level. They may also be useful for adjusting the copyright factors in various fields or for supplying additional information on the global markets of specific copyright products. This kind of information may be made available by industry-wide or core-industry groupings.

#### 7.1.5 Non-Governmental Organizations

413. A number of international non-governmental organizations, especially the ones representing major stakeholders of copyright and related rights, also collect relevant data. Unfortunately, these statistics are often reserved for their members or, for some other reason, not made easily available. They do not necessarily follow international statistical standards, but may have interesting levels of disaggregation.

## 7.2 Scope and Organization of Statistics

### 7.2.1 The Scope of Estimates

#### 7.2.1.1 Illegal Activities

414. The value added approach cannot capture illegal activities, the underground economy, and the external effects thereof. Consequently, the value of goods and services that are not produced for sale, as well as the production of illegal copies, is not reflected in national statistics. Following this principle, the value added reported by the core copyright-based industries does not generally include the value or economic size of illegal activities.



415. It must be recognized that, with respect to some of the non-core industries such as the retail and wholesale industries, there will perhaps be some inclusion of the value of illegal activities which cannot be distinguished. For this reason, if a country with rampant piracy is analyzed, every effort should be made to focus on legitimate activities and to exclude all illegal activities as far as possible. This may be a rather difficult exercise, but this scope has to be borne in mind.

416. This position on illegal activities is consistent with that adopted by the 2008 SNA on the non-observed economy. The SNA uses this term for ‘activities that, for one reason or another, are not captured in regular statistical enquiries. The reason may be that the activity is informal and thus escapes the attention of surveys geared to formal activities; it may be that the producer is anxious to conceal a legal activity, or it may be that the activity is illegal’. Illegal activities are not measured.

417. Some legitimate activities could be informal. Chapter 25 of the 2008 SNA makes a set of detailed proposals for the measurement of the informal aspects of the economy within households. Annex V provides a questionnaire which can be used to collect data on the informal copyright sector through households.

418. For a proposed study, the same survey that is used to collect data from the unmeasured informal economy is also used to measure the observed informal economy. The data can then be processed and weighted. Components of unobserved informal activities may be added to the estimates of copyright output obtained from the standard accounts. Some informal establishments might still avoid enumeration, and this data might cause underestimation. This is a limitation of the measurement process.

#### 7.2.1.2 The Market Aspect

419. In making estimates, an analyst should consider sources of data on activities which might not be recorded in the formal or official system. An imputation will have to be made for these activities using the methodologies that apply to market activities and market prices as the standard of valuation. This is particularly relevant to cultural production not normally destined for the market. Hence it would be difficult to compile statistics on activities such as crafts, which are often not reported in national accounts.<sup>171</sup> Sources of data on own-account activities and own-consumption should

also be considered and imputations made. In order to apply the value added approach to measuring the overall contribution of copyright, the analyst must assume that the market approach has been fully adopted as an economic principle by society.

420. The general rule advised by the SNA<sup>172</sup> is that the value of non-market activities should be determined by summing the comparable market-related costs of producing them. In applying this method, the analyst must be very aware that these costs do not readily reflect changes in the quality of the activities or the impact of any productivity changes that might accompany ongoing technological changes. Where possible, the analyst must identify data sources that indicate the extent of the ongoing changes and the effects on the costs of production.

#### 7.2.1.3 Missing Categories

421. A notable problem is that there will inevitably be ‘blanks’ in national statistics. The difficulty in separating one activity from another within the framework of a broader class often comes from the fact that statistics rely on the consolidated accounts statements of companies. In many cases these may not separately identify all copyright-related activities, which instead might be reported under aggregate headings. Researchers need either to obtain disaggregated data or to devise methods of disaggregating it. This problem could be addressed in part by the use of special surveys, focus groups, applicable estimation methods, and supplementary statistics, as indicated earlier in this *Guide*.

#### 7.2.1.4 New Categories

422. An analyst must always be conscious that new categories of activity are always appearing on the market because of rapid changes in technology, patterns of taste, and marketing methods (for example, e-commerce and cloud computing). Methodologies for measuring such activities tend to be developed with a time lag, and this may apply to the period when a particular study is being conducted.

423. With the ongoing rapid development of the copyright-based industries, new products are being created that are clearly based on copyright but for which an agreed methodology for measurement has not yet been established. An example is virtual



education, which is not currently measured because of the recognized difficulties associated with the resources needed for measurement. Where possible, with regard to these new or missing categories, the survey should clearly state which clusters of activities have been identified but not addressed because of methodological development issues.

424. In cases of missing categories, and data on them, output measures have sometimes been compared from different sources to correctly calculate the value added. In general, using different types of statistic to obtain figures for the same indicator should be avoided. Working with industry statistics may be inevitable in order to deal with gaps in official statistics.<sup>173</sup> However, industry association data should be treated with care as it may be based on a limited sample of, for instance, the top twenty companies in a specific sector.

## 7.2.2 Conceptual Issues

425. The logic of statistics does not always follow the logic of copyright, and sometimes these two are difficult to reconcile. An example is the balance of payment statistics covering the trade in goods and services. There are two problems with the available data sources. One has to do with the documentation of trade and the other with the documentation of payment flows.

426. Regarding trade, the 2008 SNA<sup>174</sup> documents the problem as follows: 'In order to add imports to domestic production to reach total supply, imports must be classified by products in a manner consistent with that used for domestic production. This is not always straightforward since imports (and exports) are classified not according to *CPC* but according to the HS or SITC. Finding a level of aggregation of the trade data that is sufficiently detailed but also consistent with domestic production may be a factor in determining the level of detail to be adopted [...]'.<sup>174</sup>

427. The analyst must be alert to the potential for misclassification, which can arise when trying to isolate the volumes of trade in copyright products or when trying to compute a measure of the overall value of such trade. The reported descriptions cannot simply be used. Time must be taken to ensure that the imports are reported in a manner that is consistent with the classifications used for domestic production.

428. Regarding payment flows, information may not capture the magnitude of copyright exports or imports. With copyright, the balance of payment data will have to show royalty flows. And in the case of company-to-company transfers, these flows are not disaggregated by product or industry. So there are figures which appear to be financial transfers but which are not specific to a given product or industry. Instead of trying to estimate how much of these financial flows relate to the copyright-based products or industries referred to in Chapter 6, the recommendation is to adopt the foreign sales approach.

429. The whole idea of export/import implies that goods flow across a border and money flows back. But this is not how the copyright-based industries generally function. They often work by giving a license to a manufacturer in a foreign country who manufactures copies of computer software or CDs, for example. When the copied products are sold, the financial return goes back to the home country. If subsidiaries are involved, then there is no return of the cash at all. Financial or accounting consolidation occurs for a company which has operations around the world, and the only time that money comes together is when investors look at the accounting data. This example illustrates the difficulties an analyst may face in any analysis of trade in copyright based on limited data sources. The analyst needs a method of monitoring the total sales of the copied products in the foreign country and must know the arrangements with respect to the share of total sales. This is the foreign sales approach. Accounting rules and practices must be studied to interpret statistical data correctly.

430. Given the growing trend towards the digitization of many copyright products, which are increasingly traded over the internet, the cross-border movement of these products cannot be easily monitored. The value, if not the volume, of this form of trade can only be determined by the associated financial flows as reported in the balance of payments.

### 7.2.3 Challenges Posed by the Organization of Statistics

#### **A. Management of data**

431. In many cases, data is available but are not published, or may be unavailable in searchable databases. The data gathering of national statistics offices tends to be organized around types of business and industry. As copyright crosses industries,

not all the data is available from single departments of statistics offices. In using data from statistics organizations, the analyst must enquire specifically about which divisions of the statistical office may have the information being gathered on copyright. Multiple contacts in agencies entrusted with the collection and processing of statistical data may be helpful.

### ***B. Accounting rules and practices***

432. Specific problems stem from accounting rules and practices. Often, import and export figures are based on the actual physical tracking of goods through customs and mostly make sense when dealing with physical goods. If an export is not physical, then it is entered for the country where the financial transfer occurred. Accounting rules and practices must be studied to interpret these financial transfers correctly.

433. Specific industry sources are often organized differently to official statistics. For example, in some countries reported book export statistics would not capture a book export unless it was organized as a part of a shipment of 2,000 or more books. So, if there is a shipment of less than 2,000 books, this shipment will not necessarily be recorded as a book shipment. This situation requires an appropriate factor to be established.

### ***C. Industry organization***

434. The copyright industry in some countries is going through a phase of vertical and horizontal integration and mergers and acquisitions. This may result in major difficulties in establishing the proportions of the contributions of different copyright-based industries; for example, book publishing vs. printing, video clips vs. film-making, etc., especially if they are carried out within the same establishment.

435. Another related effect comes from the mobility of the copyright-based industries. Industries may gradually move from one group to another as they evolve or as statistical treatment becomes more refined. This will affect the results of the surveys for the different groups, but likely will not affect the overall copyright-based contribution.

### ***D. Adjustments***

436. The organization and the scope of statistics imply inevitable adjustments, such as the equating of the periodicity of the analysis with regard to the specific indicators,

the selection of output measures and the use of outdated information. Adjustments that are based on interviews should take into account the fact that people may be sensitive about providing exact information, which may be related to the mode of payment, reporting for tax avoidance purposes, etc. This is why the compilation of estimated data should be as transparent as possible and take such inaccuracies into consideration.

### ***E. Double counting***

437. One specific case where adjustments are crucial is in avoiding double counting. As described above, some copyright-based activities may be accounted for only in employment statistics and should not be double counted with industry statistics. For example, if the salary of a film director is accounted for in the employment statistics but the salary is actually paid by the film industry, it would appear under the film industry and should not be added to the value added elsewhere.

## **7.3 Future Trends**

438. The following major trends have been observed and could improve the means of measuring copyright-based industries and provide some additional solutions to the problem of the availability and the structure of statistical data.

### **7.3.1 Refining the Methodology for Measuring Intangible Assets – Intellectual Property Assets**

439. The 2008 SNA incorporated new guidelines for the treatment of intangible assets. The first step was to change the name of intangible assets to ‘intellectual property assets’. These are at the heart of the production and distribution of copyright output.

#### ***A. Produced Assets – Fixed Intellectual Property Assets***

440. ‘Produced intellectual property assets’ include items such as film originals and musical sound recording masters, together with contracts, leases, and licenses that arise from intellectual property such as copyright. These are all fixed assets and calculated as part of the non-financial assets of the economy (see Table 7.1 below).



Analysts are encouraged to become familiar with the valuation of intellectual property assets.

441. The SNA advises that the '[o]riginals of intellectual property products, such as computer software and entertainment, literary or artistic originals should be entered at the written-down value of their initial cost and revalued to the prices of the current period. Since these products will have often been produced on own account, the initial cost may be estimated by the sum of costs incurred including return to capital on the fixed assets used in production. If value cannot be established in this way, it may be appropriate to estimate the present value of future returns arising from the use of the original in production.'<sup>175</sup>

442. The accumulation of these important assets is not cost-free to business: of the expenses for advertising, training, and customer service, a proportion are related to the accumulation of these assets and could be considered to be partly capital in nature.

- Furthermore, analysts should note that the SNA advises that market prices can be used to value copies of originals: 'Subsequent copies may appear as assets, if (i) the original owner has subcontracted the duties of reproducing and providing support to users of the copies, or (ii) a copy is being used under a contract which is effectively a financial lease. In these cases, market prices should be available to use for valuation.'<sup>176</sup>

**Table 7.1 Financial and Non-Financial Assets<sup>177</sup>**

Non-financial assets	Produced assets	Fixed assets	Tangible fixed assets
			Fixed intellectual property assets (intangible fixed assets)
		Inventories	
		Valuables	
	Non-produced assets	Tangible non-produced assets	
		Intangible non-produced assets (intellectual property assets)	
Financial assets			

443. It is an economic specificity related to software and other digital products that makes it difficult to draw the line between originals and reproductions, since

digital copies are exact copies of a master copy. It would seem prudent to consider the owner of the 'master copy' to be the entity which has the legal right to make copies or to authorize others to do so. However, where an enterprise has a license to reproduce a copyright product, either for its own use or for sale, for more than a year, this reproduction license should be treated as an asset or gross fixed capital formation. Otherwise a reproduction license is to be considered as intermediate consumption.<sup>178</sup>

444. Similarly, where a copyright product is reproduced by being incorporated into another product, the license is correctly treated as intermediate consumption even when it is for multiple years. The OECD Handbook on Deriving Capital Measures of Intellectual Property Products<sup>179</sup> gives useful insights on classifying and measuring the value of originals and reproductions, including master copies of artistic and entertainment products, and is a useful guide for analysts.<sup>180</sup>

445. With regard to entertainment and literary and artistic originals, some of the practical difficulties are related to estimating the expected future income stream resulting from either royalties or the sale of copies of the original. In the case of works such as paintings, which are produced in single and unique copies, the value can be taken as the sale or market price of the product. The 2008 SNA<sup>181</sup> advised that these products be treated as stores of value and be recorded in the capital account and not as intermediate consumption.

446. A number of the copyright-based activities that comprise the subject of a study could be classified among the indicated categories, and in particular within non-produced intellectual property assets.

### ***B. Non-Produced Intellectual Property Assets***

447. With regard to some of the issues already considered, it is worth noting that the starting point is the recognition of the existing limitations of statistical methodology. For example, within the category 'purchased goodwill', national accounts do not currently recognize such important assets as brand names, trademarks, knowledge capital, and goodwill. These are all non-produced intellectual property assets. An analyst should ascertain how these are treated in the national accounts and encourage suitable adjustments in line with the 2008 SNA.





### 7.3.2 Convergence of Classifications

448. Work has been undertaken in the framework of the United Nations Statistical Commission on the convergence of industrial classifications. A report has been prepared to this end under an agreement between Statistics Canada, the Office of Management and Budget of the United States of America, and the Statistical Office of the European Communities.<sup>182</sup> Convergence scenarios are being developed for the future convergence between NACE (the General Industrial Classification of Economic Activities) and NAICS (the North American Industry Classification System). With regard to the remaining difficulties, notably in definitions, the aim at this stage is convergence on a higher level of grouping.<sup>183</sup> The 'Arts, Entertainment, and Recreation Activities' grouping has been recognized as particularly difficult, as have some groupings in the category of services. Reports have been produced regularly since the launching of this initiative in 2000.<sup>184</sup>

## FINAL REMARKS

The current revision of the WIPO *Guide on Surveying the Economic Contribution of the Copyright Industries* incorporates the suggestions and recommendations made during the implementation of the methodology over a twelve-year period. It significantly develops the first version of the methodology by providing discussions of conceptual issues, by updating analytical and statistical frameworks, and by providing practical approaches to solving some of the challenges that are part of the measurement process. WIPO hopes that this edition will assist researchers in carrying out professional analysis of the economic contribution and potential of the industries supported by copyright.

## ANNEX I

### LIST OF THE COPYRIGHT INDUSTRIES

Type of Copyright Industry	Main Groups of Industries	Subgroups
Core Copyright	Press and Literature	Authors, writers, translators; Newspapers; News and feature agencies; Magazines and periodicals; Book publishing; Cards and maps, directories and other published material; Pre-press, printing and post-press of books, magazines, newspapers; Advertising materials; Wholesale and retail of press and literature (bookstores, news-stands, etc.); Libraries
	Music, Theatrical Productions, Operas	Composers, lyricists, arrangers, choreographers, directors, performers and other personnel; Printing and publishing of music; Production/manufacturing of recorded music; Wholesale and retail of recorded music (sale and rental); Artistic and literary creation and interpretation; Performances and allied agencies (bookings, ticket agencies, etc.)
	Motion Picture and Video	Writers, directors, actors etc.; Motion picture and video production and distribution; Motion picture exhibition; Video rentals and sales, video on demand; Allied services
	Radio and Television	National radio and television broadcasting companies; Other radio and television broadcasters; Independent producers; Cable television (systems and channels); Satellite television; Allied services
	Photography	Studios and commercial photography; Photo agencies and libraries
	Software, Databases, and Computer Games	Programming, development and design, manufacturing; Wholesale and retail pre-packaged software (business programs, video games, educational programs, etc.); Database processing and publishing
	Visual and Graphic Arts	Artists; Art galleries, other wholesale and retail; Picture framing and other allied services; Graphic design
	Advertising Services	Agencies, buying services
	Copyright Collecting Societies	

**List of the Copyright Industries (cont.)**

Type of Copyright Industry	Main Groups of Industries	Subgroups
Interdependent Industries	TV Sets, Radios, VCRs, CD Players, DVD Players, Cassette Players, Electronic Game Equipment, and Other Similar Equipment	Manufacture; Wholesale and retail
	Computers and Equipment	Manufacture; Wholesale and retail (sales and rental)
	Musical Instruments	Manufacture; Wholesale and retail (sales and rental)
	Photographic and Cinematographic Instruments	Manufacture; Wholesale and retail (sales and rental)
	Photocopiers	Manufacture; Wholesale and retail (sales and rental)
	Blank Recording Material	Manufacture; Wholesale and retail
	Paper	Manufacture; Wholesale and retail
Partial Copyright Industries	Apparel, textiles, and footwear; Jewelry and coins; Other crafts; Furniture; Household goods, china and glass; Wallcoverings and carpets; Toys and games; Architecture, engineering, surveying Interior design; Museums	
Non-dedicated Support Industries	General wholesale and retail; General transportation; Telephony and Internet	

## ANNEX IIA

### UNITED NATIONS INTERNATIONAL STANDARD INDUSTRIAL CLASSIFICATION CODES CORRESPONDING TO THE COPYRIGHT INDUSTRIES (ISIC REV. 4)

#### 5. Core Copyright Industries

##### *Press and Literature*

Economic Activity	ISIC Rev.4 code	Description (Class)
Authors, writers, translators	9000 (s) 7490 (m) 8299 (m)	9000 – Creative, arts, and entertainment activities 7490 – Other professional, scientific, and technical activities n.e.c. (inc. translation and interpretation activities) 8299 – Other business support service activities n.e.c. (inc. real-time, i.e. simultaneous, closed captioning of live television performances of meetings, conferences)
Newspapers	5813 (s)	5813 – Publishing of newspapers, journals, and periodicals
News and feature agencies, etc.	6391	6391 – News agency activities
Magazines and periodicals	5813 (s)	5813 – Publishing of newspapers, journals, and periodicals
Book publishing	5811	5811 – Book publishing
Cards, maps, directories, and other published material	5812 5819	5812 – Publishing of directories and mailing lists 5819 – Other publishing activities
Pre-press, printing, and post-press of books, magazines, newspapers, advertising materials	1811 1812 (s) 8219	1811 – Printing 1812 – Service activities related to printing 8219 – Photocopying, document preparation, and other specialized office support activities
Wholesale and retail of press and literature (bookstores, news-stands, etc.)	4649 (s, m) 4761 7729 (s, m)	4649 – Wholesale of other household goods (inc. wholesale of stationery, books, magazines and newspapers) 4761 – Retail sale of books, newspapers, and stationery in specialized shops 7729 – Renting and leasing of other personal and household goods (inc. books, journals, and magazines)
Libraries	9101	9101 – Library and archives activities

(s) Industry class shared between several copyright industries  
(m) Mixed industry class including both copyright and non-copyright related industries

**Music, Theatrical Productions, Operas**

Economic Activity	ISIC Rev.4 code	Description (Class)
Composers, lyricists, arrangers	9000 (s)	9000 – Creative, arts, and entertainment activities
Choreographers, writers	9000 (s)	9000 – Creative, arts, and entertainment activities
Directors, performers and other personnel	9000 (s)	9000 – Creative, arts, and entertainment activities
Printing and publishing of music	5920	5920 – Sound recording and music publishing activities
Production/manufacturing of recorded music	1820 (s)	1820 – Reproduction of recorded media
Wholesale, retail and rentals of recorded music (sale and rental)	4649 (s, m)	4649 – Wholesale of other household goods (inc. wholesale of recorded audio, CDs)
	4762 (s)	4762 – Retail sale of music and video recordings in stores
	7722 (s)	7722 – Renting of video tapes and disks
Artistic and literary creation and interpretation	9000 (s)	9000 – Creative, arts, and entertainment activities
Performances and allied agencies (bookings, ticket agencies, etc.)	7990 (s)	7990 – Other reservation service and related activities (inc. ticket sales, activities for theatrical, sports and other amusement and entertainment events)
	9000 (s)	9000 – Creative, arts, and entertainment activities
(s) Industry class shared between several copyright industries		
(m) Mixed industry class including both copyright and non-copyright related industries		

**Motion Picture and Video**

Economic Activity	ISIC Rev.4 code	Description (Class)
Writers, directors, actors	9000 (s)	9000 – Creative, arts, and entertainment activities
Motion picture and video production and distribution	591 (s)	5911 – Motion picture, video, and television program production activities
		5912 – Motion picture, video, and television program post production activities
		5913 – Motion picture, video, and television program distribution activities
Motion picture exhibition	5914	5914 – Motion picture projection activities
Video rentals and sales, video on demand	7722 (s)	7722 – Renting of video tapes and discs
	4649 (s, m)	4649 – Wholesale of other household goods (inc. wholesale of DVDs)
	4762 (s)	4762 – Retail sale of music and video recordings in specialized shops
Allied services	1820 (s)	1820 – Reproduction of recorded media
(s) Industry class shared between several copyright industries		
(m) Mixed industry class including both copyright and non-copyright related industries		

### Radio and Television

Economic Activity	ISIC Rev.4 code	Description (Class)
Television program production activities	591 (s)	5911 – Motion picture, video, and television program production activities 5912 – Motion picture, video, and television program post production activities 5913 – Motion picture, video, and television program distribution activities
National radio and television broadcasting companies	6010 6020	6010 – Radio broadcasting 6020 – Television programming and broadcasting activities
Independent producers	5911 (s)	5911 – Motion picture, video, and television program production activities

(s) Industry class shared between several copyright industries

### Photography

Economic Activity	ISIC Rev.4 code	Description (Class)
Studios and commercial photography	7420 (s)	7420 – Photographic activities

(s) Industry class shared between several copyright industries

### Software, Databases and Computer Games

Economic Activity	ISIC Rev.4 code	Description (Class)
Programming, development and design, manufacturing	5820 62 (m)	5820 – Software publishing 6201 – Computer programming activities 6202 – Computer consultancy and computer facilities management activities 6209 – Other information technology and computer service activities
Wholesale and retail pre-packaged software (business programs, video games, educational programs, etc.)	4651 (s) 4741 (s)	4651 – Wholesale of computers, computer peripheral equipment, and software (inc. software) 4741 – Retail sale of computers, peripheral units, software and telecommunications equipment in specialized stores (inc. retail sale of non-customized software, including video games)
Database processing and publishing	631	6311 – Data processing, hosting, and related activities 6312 – Web portals

(s) Industry class shared between several copyright industries  
(m) Mixed industry class including both copyright and non-copyright related industries

**Visual and Graphic Arts**

Economic Activity	ISIC Rev.4 code	Description (Class)
Artists	9000 (s)	9000 – Creative, arts, and entertainment activities
Art galleries and other wholesale and retail	9000 (s)	9000 – Creative, arts, and entertainment activities
Picture framing and other allied services	7420 (s)	7420 – Photographic activities
Service activities related to printing	1812 (s)	1812 – Service activities related to printing (inc. artistic work)
Graphic design	9000 (s) 1812 (s) 7410 (s)	9000 – Creative, arts and entertainment activities 1812 – Service activities related to printing (inc. artistic work) 7410 – Specialized design activities (inc. graphic designers)
(s) Industry class shared between several copyright industries		
(m) Mixed industry class including both copyright and non-copyright related industries		

**Advertising**

Economic Activity	ISIC Rev.4 code	Description (Class)
Agencies, buying services	7310 7320 (m)	7310 – Advertising 7320 – Market research and public opinion polling (inc. marketing studies)
(m) Industry class partially including copyright industries		

**Copyright Collecting Societies**

Economic Activity	ISIC Rev.4 code	Description (Class)
Copyright Collecting Societies	9412 (m)	9412 – Activities of professional membership organizations (inc. associations of specialists engaged in cultural activities)
(m) Mixed industry class including both copyright and non-copyright related industries		

**6. Partial Copyright Industries**

Economic Activity	ISIC Rev.4 code	Description (Class)
Apparel, textiles, and footwear	1410 1392 1520 4641 4751 4771 7410 (s)	1410 – Manufacture of wearing apparel 1392 – Manufacture of made-up textile articles, except apparel 1520 – Manufacture of footwear 4641 – Wholesale of textiles, clothing, and footwear 4751 – Retail sale of textiles in specialized stores 4771 – Retail sale of clothing, footwear, and leather articles in specialized stores 7410 – Specialized design activities



Economic Activity	ISIC Rev.4 code	Description (Class)
Jewelry and coins	3211 3212 4649 (s, m) 4719 (s, m) 4773 (s, m) 7410 (s)	3211 – Manufacture of jewelry and related articles 3212 – Manufacture of imitation jewelry and related articles 4649 – Wholesale of other household goods (inc. jewelry) 4719 – Other retail sales in non-specialized stores (inc. jewelry) 4773 – Other retail sales of new goods in specialized stores (inc. jewelry). 7410 – Specialized design activities
Other crafts	9499 (s, m) 4719 (s, m) 4759 (s, m) 7410 (s)	9499 – Activities of other membership organizations n.e.c. (inc. craft and collectors' clubs). 4719 – Other retail sales in non-specialized stores (inc. handcrafts) 4759 – Retail sale of electrical household appliances, furniture 7410 – Specialized design activities
Furniture	3100 4649 (s, m) 4719 (s, m) 4759 (s, m) 7410 (s) 7729 (s, m)	3100 – Manufacture of furniture 4649 – Wholesale of other household goods (inc. furniture) 4719 – Other retail sales in non-specialized stores (inc. furniture) 4759 – Retail sale of electrical household appliances, furniture 7410 – Specialized design activities 7729 – Renting and leasing of other personal and household goods (inc. furniture)
Household goods, china and glass	2310 (m) 1391 (m) 1430 (m) 1629 (m) 2599 (m) 4649 (s, m) 4752 (m) 4759 (s, m) 7410 (s)	2310 – Manufacture of glass and glass products 1391 – Manufacture of knitted and crocheted fabrics 1430 – Manufacture of knitted and crocheted apparel 1629 – Manufacture of other products of wood 2599 – Manufacture of other fabricated metal products n.e.c. 4649 – Wholesale of other household goods (inc. china and glassware) 4752 – Retail sale of hardware, paints, and glass in specialized stores 4759 – Retail sale of electrical household appliances, furniture, lighting equipment, and other household articles in specialized stores 7410 – Specialized design activities
Wallcoverings and carpets	1393 (m) 1709 (s) 4753 7410 (s)	1393 – Manufacture of carpets and rugs 1709 – Manufacture of other articles of paper and paperboard 4753 – Retail sale of carpets, rugs, wall, and floor coverings in specialized stores 7410 – Specialized design activities
Toys and games	3240 4649 (s, m) 4719 (s, m) 4764 (s) 7410 (s)	3240 – Manufacture of games and toys 4649 – Wholesale of other household goods (inc. toys) 4719 – Other retail sales in non-specialized stores (inc. toys) 4764 – Retail sale of games and toys in specialized stores 7410 – Specialized design activities
Architecture, engineering, surveying	7110 (m)	7110 – Architectural and engineering activities and related technical consultancy
Design	7410 (s)	7410 – Specialized design activities (inc. interior decorators).
Museums	9102	9102 – Museums activities and preservation of historical sites and buildings
(s) Industry class shared between several copyright industries (m) Industry class partially including copyright industries		

## 7. Interdependent Copyright Industries

Economic Activity, Manufacture, Wholesale, and Retail (Sales and Rental)	ISIC Rev.4 code	Description (Class)
TV Sets, Radios, VCRs, CD Players, DVD Players, Cassette Players, Electronic Game Equipment, and Other Similar Equipment	2630 (m)	2630 – Manufacture of communication equipment (inc. radio and TV studio and broadcasting equip.)
	2640	2640 – Manufacture of consumer electronics (inc. TVs, VCRs, DVDs, Hi-Fis, consoles)
	4649 (s, m)	4649 – Wholesale of other household goods (inc. wholesale of consumer electronics)
	4742	4742 – Retail sale of audio and video equipment in specialized stores
	7729 (s, m)	7729 – Renting and leasing of other personal and household goods (inc. relevant electronic equipment for household use)
	7730 (s, m)	7730 – Renting and leasing of other machinery, equipment, and tangible goods (inc. profess. radio and TV equip.)
Computers and Equipment	2620	2620 – Manufacture of computers and peripheral equipment
	4651 (s)	4651 – Wholesale of computers, computer peripheral equipment, and software (inc. computers and computer equipment)
	4741 (s)	4741 – Retail sale of computers, peripheral units, software, and telecommunications equipment in specialized stores (inc. computers)
	7730 (s, m)	7730 – Renting and leasing of other machinery, equipment, and tangible goods (inc. computers and computer peripheral equipment)
Musical Instruments	3220	3220 – Manufacture of musical instruments
	4649 (s, m)	4649 – Wholesale of other household goods (inc. musical instruments)
	4759 (s, m)	4759 – Retail sale of electrical household appliances (inc. musical instruments)
	7729 (s, m)	7729 – Renting and leasing of other personal and household goods (inc. musical instruments, scenery, and costumes)
Photographic and Cinematographic Instruments	2670 (s, m)	2670 – Manufacture of optical instruments and photographic equipment
	4649 (s, m)	4649 – Wholesale of other household goods (inc. photographic and optical goods)
	4773 (m)	4773 – Other retail sales of new goods in specialized stores (inc. photographic, optical and precision equipment)
	7730 (s, m)	7730 – Renting and leasing of other machinery, equipment, and tangible goods (inc. motion picture production equipment)
Photocopiers	2817 (m)	2817 – Manufacture of office machinery and equipment (inc. photocopy machines)
	4659 (m)	4659 – Wholesale of other machinery and equipment (inc. office machinery and equipment)
Blank Recording Material	2680	2680 – Manufacture of magnetic and optical media.
	4652 (m)	4652 – Wholesale of electronic and telecommunications equipment and parts (inc. blank material)
Paper	1701	1701 – Manufacture of pulp, paper, and paperboard
	1702	1702 – Manufacture of corrugated paper and paperboard and of containers of paper and paperboard
	1709 (s)	1709 – Manufacture of other articles of paper and paperboard
(s) Industry class shared between several copyright industries		
(m) Mixed industry class including both copyright and non-copyright related industries		

## 8. Non-Dedicated Support Industries

Economic Activity	ISIC Rev.4 code	Description (Class)
General wholesale and retailing (G)	46 (s)	Division: 46 – Wholesale trade and commission trade, except of motor vehicles and motorcycles This Division includes the following classes: 461 – Wholesale on a fee or contract basis 464 – Wholesale of household goods (not prev. inc. in other CIs) 466 – Other specialized wholesale
	47 (s)	Division: 47 – Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods This Division includes the following classes: 471 – Retail sale in non-specialized stores (not prev. inc. in other CIs) 474 – Retail sale of information and communications equipment in specialized stores (not prev. inc. in other CIs) 475 – Retail sale of other household equipment in specialized stores (not prev. inc. in other CIs) 477 – Retail sale of other goods in specialized stores (not prev. inc. in other CIs) 476 – Retail sale of cultural and recreation goods in specialized stores (not prev. inc. in other CIs) 477 – Retail sale of other goods in specialized stores (not prev. inc. in other CIs) 478 – Retail sale via stalls and markets 479 – Retail trade not in stores, stalls, or markets
General transportation (H)	49	Division: 49 – Land transport; transport via pipelines
	50	Division: 50 – Water transport
	51	Division: 51 – Air transport
	522	This Group is divided into the following Classes: 52.21/22/23/24/29 – support activities for transportation
	53	Division: 53 – Postal and courier activities
	79	Division: 79 – Travel agency, tour operator, reservation service, and related activities
Information and communication (J)	61	Division: 61 – Telecommunications
(s) Industry class shared between several copyright industries		

## ANNEX IIB

### UNITED NATIONS INTERNATIONAL STANDARD INDUSTRIAL CLASSIFICATION CODES CORRESPONDING TO THE COPYRIGHT INDUSTRIES (ISIC REV.3.1)

#### 1. Core Copyright Industries

##### *Press and Literature*

Economic Activity	ISIC Rev.3.1 code	Description (Class)
Authors, writers, translators	9214, 7499	Class: 9214 – Dramatic arts, music and other arts activities Class: 7499 – Other business activities n.e.c. (for translation and interpretation)
Newspapers	2212	Class: 2212 – Publishing of newspapers, journals, and periodicals
News and feature agencies etc.	9220	Class: 9220 – News agency activities
Magazines and periodicals	2212	Class: 2212 – Publishing of newspapers, journals, and periodicals
Book publishing	2211	Class: 2211 – Publishing of books, brochures, and other publications
Cards, maps, directories, and other published material	2219	Class: 2219 – Other publishing
Pre-press, printing, and post-press of books, magazines, newspapers, advertising materials	2221 2222	Class: 2221 – Printing Class: 2222 – Service activities related to printing
Wholesale and retail of press and literature (book stores, newsstands, etc.)	5139 5239	Class: 5139 – Wholesale of other household goods Class: 5239 – Other retail sale in specialized stores
Libraries	9231	Class: 9231 – Library and archives activities

### **Music, Theatrical Productions, Operas**

<b>Economic Activity</b>	<b>ISIC Rev.3.1 code</b>	<b>Description (Class)</b>
Composers, lyricists, arrangers, choreographers, writers, directors, performers, and other personnel	9214 9219 9249	Class: 9214 – Dramatic arts, music, and other arts activities Class: 9219 – Other entertainment activities n.e.c. Class: 9249 – Other recreational activities
Printing and publishing of music	2213	Class: 2213 – Publishing of music
Production/ manufacturing of recorded music	2230	Class: 2230 – Reproduction of recorded media
Wholesale and retail of recorded music (sale and rental)	5233 7130 5139	Class: 5233 – Retail sale of household appliances, articles, and equipment Class: 7130 – Renting of personal and household goods n.e.c. Class: 5139 – Wholesale of other household goods (incl. wholesale of recorded video tapes)
Artistic and literary creation and interpretation	9214	Class: 9214 – Dramatic arts, music, and other arts activities
Performances and allied agencies (bookings, ticket agencies, etc.)	9214	Class: 9214 – Dramatic arts, music, and other arts activities

### **Motion Picture and Video**

<b>Economic Activity</b>	<b>ISIC Rev.3.1 code</b>	<b>Description (Class)</b>
Writers, directors, actors	9214	Class: 9214 – Dramatic arts, music, and other arts activities
Motion picture and video production and distribution	9211	Class: 9211 – Motion picture and video production and distribution
Motion picture exhibition	9212	Class: 9212 – Motion picture projection
Video rentals and sales, video on demand	7130 9211	Class: 7130 – Renting of personal and household goods n.e.c. Class: 9211 – Motion picture and video production and distribution
Allied services	2230	Class: 2230 – Reproduction of recorded media

### **Radio and Television**

<b>Economic Activity</b>	<b>ISIC Rev.3.1 code</b>	<b>Description (Class)</b>
National radio and television broadcasting companies	9213	Class: 9213 – Radio and television activities
Other radio and television broadcasters	9213	Class: 9213 – Radio and television activities
Independent producers	7499	Class: 7499 – Other business activities n.e.c.
Cable television (systems and channels)	6420	Class: 6420 – Telecommunications
Satellite television	6420	Class: 6420 – Telecommunications
Allied services	9213	Class: 9213 – Radio and television activities

**Photography**

Economic Activity	ISIC Rev.3.1 code	Description (Class)
Studios and commercial photography	7494	Class: 7494 – Photographic activities
Photo agencies and libraries	2222 7499 9231	Class: 2222 – Service activities related to printing Class: 7499 – Other business activities n.e.c. Class: 9231 – Library and archives activities

**Software and Databases**

Economic Activity	ISIC Rev.3.1 code	Description (Class)
Programming, development and design, manufacturing	7221 7229	Class: 7221 – Software publishing Class: 7229 – Other software consultancy and supply
Wholesale and retail prepackaged software (business programs, video games, educational programs etc.)	5151	Class: 5151 –Wholesale of computers, computer peripheral equipment, and software
Database processing and publishing	7240 7230	Class: 7240 – Database activities and on-line distribution of electronic content Class: 7230 – Data processing

**Visual and Graphic Arts**

Economic Activity	ISIC Rev.3.1 code	Description (Class)
Artists	9214	Activities by authors, music composers, and other independent artists n.e.c.
Art galleries and other wholesale and retail	9214	Class: 9214 – Dramatic arts, music, and other arts activities
Picture framing and other allied services	7494	Class: 7494 – Photographic activities
Graphic design	9214 7499	Class: 9214 – Dramatic arts, music, and other arts activities Class: 7499 – Other business activities n.e.c.

**Advertising Services**

Economic Activity	ISIC Rev.3.1 code	Description (Class)
Agencies, buying services	7430	Class: 7430 – Advertising

**Copyright Collecting Societies**

Economic Activity	ISIC Rev.3.1 code	Description (Class)
Copyright Collecting Societies	9112	Class: 9112 – Activities of professional organizations

## 2. Interdependent Copyright Industries

Economic Activity	ISIC Rev.3.1 code	Description (Class)
Manufacture, wholesale and retail (sales and rental) of: TV sets, Radios, VCRs, CD Players, DVD Players, Cassette Players, Electronic Game Equipment, and other similar equipment	3230	Class: 3230 – Manufacture of television and radio receivers, sound or video recording or reproducing apparatus, and associated goods
	5139	Class: 5139 – Wholesale of other household goods
	5233	Class: 5233 – Retail sale of household appliances, articles, and equipment
	7130	Class: 7130 – Renting of personal and household goods n.e.c.
Computers and Equipment	3000	Class: 3000 – Manufacture of office, accounting, and computing machinery
	5151	Class: 5151 – Wholesale of computers, computer peripheral equipment, and software
	7123	Class: 7123 – Renting of office machinery and equipment (including computers)
Musical Instruments	3692	Class: 3692 – Manufacture of musical instruments
	5139	Class: 5139 – Wholesale of other household goods
	5233	Class: 5233 – Retail sale of household appliances, articles, and equipment
Photographic and Cinematographic Instruments	3320	Class: 3320 – Manufacture of optical instruments and photographic equipment
	5139	Class: 5139 – Wholesale of other household goods
	5239	Class: 5239 – Other retail sale in specialized stores
	7129	Class: 7129 – Renting of other machinery and equipment n.e.c.
Photocopiers	3000	Class: 3000 – Manufacture of office, accounting, and computing machinery
	5159	Class: 5159 – Wholesale of other machinery, equipment, and supplies
Blank Recording Material	2429	Class: 2429 – Manufacture of other chemical products n.e.c.
	5152	Class: 5152 – Wholesale of electronic and telecommunications parts and equipment
	5233	Class: 5233 – Retail sale of household appliances, articles, and equipment
Paper	2101	Class: 2101 – Manufacture of pulp, paper, and paperboard
	5149	Class: 5149 – Wholesale of other intermediate products, waste, and scrap
	5239	Class: 5239 – Other retail sale in specialized stores

### 3. Partial Copyright Industries

Economic Activity	ISIC Rev.3.1 code	Description (Class)
Apparel, textiles, and footwear	1810 1721 1920 5131 5232	Class: 1810 – Manufacture of wearing apparel Class: 1721 – Manufacture of made-up textile articles Class: 1920 – Manufacture of footwear Class: 5131 – Wholesale of textiles, clothing, and footwear Class: 5232 – Retail sale of textiles, clothing, footwear, and leather goods
Jewelry and coins	3691 5139 5239	Class: 3691 – Manufacture of jewelry and related articles Class: 5139 – Wholesale of other household goods Class: 5239 – Other retail sale in specialized stores
Other crafts	9199 5239	Class: 9199 – Activities of other membership organizations n.e.c. Class: 5239 – Other retail sale in specialized stores
Furniture	3610 5139 7130	Class: 3610 – Manufacture of furniture Class: 5139 – Wholesale of other household goods Class: 7130 – Renting of personal and household goods n.e.c.
Household goods, china, and glass	2610 173 2029 2899 5139 5233	Class: 2610 – Manufacture of glass and glass products Class: 173 – Manufacture of knitted and crocheted fabrics and articles Class: 2029 – Manufacture of other products of wood Class: 2899 – Manufacture of other fabricated metal products n.e.c. Class: 5139 – Wholesale of other household goods Class: 5233 – Retail sale of household appliances, articles, and equipment
Wall coverings and carpets	1722 2109 5239	Class: 1722 – Manufacture of carpets and rugs Class: 2109 – Manufacture of other articles of paper and paperboard Class: 5239 – Other retail sale in specialized stores
Toys and games	3694 5139 5239	Class: 3694 – Manufacture of games and toys Class: 5139 – Wholesale of other household goods Class: 5239 – Other retail sale in specialized stores
Architecture, engineering, surveying	7421	Class: 7421 – Architectural and engineering activities and related technical consultancy
Interior design	7499	Class: 7499 – Other business activities n.e.c.
Museums	9232	Class: 9232 – Museums activities and preservation of historical sites and buildings



#### 4. Non-dedicated Support Industries

Economic Activity	ISIC Rev.3.1 code	Description (Class)
General wholesale and retailing	51	Division: 51 –Wholesale trade and commission trade, except of motor vehicles and motorcycles 511 – Wholesale on a fee or contract basis 513 – Wholesale of household goods 515 – Wholesale of machinery, equipment, and supplies 519 – Other wholesale
	52	Division: 52 – Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods 521 – Non-specialized retail trade in stores 523 – Other retail trade of new goods in specialized stores 525 – Retail trade not in stores.
General transportation	60	Division: 60 – Land transport; transport via pipelines This Division is divided into the following Groups: Group 601 – Transport via railways Group 602 – Other land transport Division:
	61	61 – Water transport Division:
	62	62 – Air transport
	630	Class 630 – Supporting and auxiliary transport activities 6301 – Cargo handling 6302 – Storage and warehousing 6303 – Other supporting transport activities 6304 – Activities of travel agencies and tour operators; tourist assistance activities n.e.c. 6309 – Activities of other transport agencies
	641	Group: 641 – Post and courier activities This Group is divided into the following Classes: 6411 – National post activities 6412 – Courier activities other than national post activities
Telephony and Internet	6420	Class: 6420 –Telecommunications
	7240	Class: 7240 – Database activities and on-line distribution of electronic content

## ANNEX III

### CORRESPONDENCE OF ISIC REV.4, CPC REV.2 AND HS 2007

449. Details of the ISIC, SITC and Harmonized systems are available on the following UN site:

<http://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=17>

450. The two steps to extracting products corresponding to industries are:

1. Click on:
  - a) Correspondence Table
  - b) Correspondence between CPC Ver.2 and ISIC Rev.4.

451. An extract from (b), showing the correspondence between product and industry, is given below as an example:

452. Correspondence between CPC Ver.2 and ISIC Rev.4

453. 2510 records found

CPC Ver.2	ISIC Rev.4	Part	Detail
83619	7310		
83620	7310		
83631	5812		

#### 454. Detailed structure and explanatory notes

455. CPC Ver.2 code [83619](#)

456. [Structure Notes](#)

457. Hierarchy

- Section: 8 – Business and production services
- Division: 83 – Other professional, technical, and business services
- Group: 836 – Advertising services and provision of advertising space or time
- Class: 8361 – Advertising services
- Subclass: 83619 – Other advertising services



**458. Explanatory note**

This subclass includes:

- aerial advertising services;
- delivery services of free samples and other advertising material;
- demonstration and presentation advertising services at point of sale; and
- sales promotion (if no orders are received)

459. This subclass does not include:

- modeling agency services, cf. 85999; and
- advertising mailing services, cf. 85953.

460. This code corresponds to the following:

CPC V1.1 code(s) 83690

ISIC Rev.4 code(s) 7310

461. [Click here for complete correspondences for this code.](#)

462. [Click here to see the alphabetical index for this code](#)

2. Next proceed to Correspondence Table below to get HS codes  
Correspondence between CPC Ver.2 and HS 2007

463. The following table shows the links between the selected classifications. In case of a partial link, the detail column specifies the portion of the second classification. An icon in the last column signifies comments, such as changes after the original publication. Clicking on the codes of either classification links to the definition of that particular category.

5333 records found

CPC Ver.2	HS 2007	Part	Detail
01111	1001.10	*	
	1001.90	*	
01112	1001.10	*	
	1001.90	*	
01121	1005.10		

464. This list is 134 pages long

## ANNEX IV

### EUROPEAN CLASSIFICATION CODES CORRESPONDING TO THE COPYRIGHT INDUSTRIES<sup>185</sup>

#### 1. Core Copyright Industries

##### *Press and Literature*

Economic Activity	NACE 2	Description (Class)
Authors, writers, translators	90.0 (s) 74.30 82.99 (m)	90.03 – Artistic creation 74.30 – Translation and interpretation activities. 82.99 – Other business support service activities n.e.c. (inc. real-time, i.e. simultaneous, closed captioning of live television performances of meetings, conferences)
Newspapers	58.13	58.13 – Publishing of newspapers
News and feature agencies, etc.	63.91	63.91 – News agency activities
Magazines/periodicals	58.14	58.14 – Publishing of journals and periodicals
Book publishing	58.11	58.11 – Book publishing
Cards, maps, directories, and other published material	58.12 58.19	58.12 – Publishing of directories and mailing lists 58.19 – Other publishing activities
Pre-press, printing, and post-press of books, magazines, newspapers, advertising materials	18.11 18.12 (s) 18.13 18.14 82.19	18.11 – Printing of newspapers 18.12 – Other printing 18.13 – Pre-press and pre-media services 18.14 – Binding and related services 82.19 – Photocopying, document preparation and other specialized office support activities
Wholesale and retail of press and literature (bookstores, news-stands, etc.)	46.49 (s, m) 47.61 47.62 77.29 (s, m)	46.49 – Wholesale of other household goods (inc. wholesale of stationery, books, magazines and newspapers) 47.61 – Retail sale of books in specialized stores 47.62 – Retail sale of newspapers and stationery in specialized stores 77.29 – Renting and leasing of other personal and household goods (inc. books, journals, and magazines)
Libraries	91.01	91.01 – Library and archives activities
(s) Industry class shared between several copyright industries		
(m) Mixed industry class including both copyright and non-copyright related industries		

**Music, Theatrical Productions, Operas**

Economic Activity	NACE 2	Description (Class)
Composers, lyricists, arrangers,	90.0 (s)	90.03 – Artistic creation
Choreographers, writers,	90.0 (s)	90.03 – Artistic creation
Directors, performers, and other personnel	90.0 (s)	90.03 – Artistic creation
Artistic and literary creation and interpretation	90.0 (s)	90.03 – Artistic creation
Support activities to the performing arts and the operation of concert and theatre halls	90.02 (s) 90.04 (s)	90.02 – Support activities to performing arts 90.04 – Operation of arts facilities
Printing and publishing of music	59.20	59.20 – Sound recording and music publishing activities
Production and manufacture of recorded music	18.20 (s)	18.20 – Reproduction of recorded media
Wholesale, retail, and rentals of recorded music (sale and rental)	46.4 (m, s)  47.63 (s)  77.2 (m, s)	46.43 – Wholesale of electrical household goods (inc. wholesale of recorded audio, CDs) 46.49 – Wholesale of other household goods (inc. wholesale of musical instruments) 47.63 – Retail sale of music and video recordings in specialized stores 77.22 – Renting of video tapes and disks 77.29 – Renting and leasing of other personal and household goods (inc. jewelry, musical instruments, scenery and costumes)
Operation of concert and theatre halls	90.04 (s)	90.04 – Operation of arts facilities
Performances and allied agencies (bookings, ticket agencies, etc.)	90.0 (s)  79.90 (s)	90.01 – Performing arts 90.02 – Support activities to performing arts 79.90 – Other reservation service and related activities (inc. ticket sales activities for theatrical, sports, and other amusement and entertainment events)
(s) Industry class shared between several Copyright industries		
(m) Mixed industry class including both Copyright and non-Copyright related industries		

**Motion Picture and Video**

Economic Activity	NACE 2	Description (Class)
Writers, directors, actors	90.0 (s)	90.03 – Artistic creation
Motion picture and video production and distribution	59.1 (s)	59.11 – Motion picture, video, and television program production activities 59.12 – Motion picture, video, and television program post-production activities 59.13 – Motion picture, video, and television program distribution activities
Motion picture exhibition	59.14	59.14 – Motion picture projection activities
Video rentals and sales, video on demand	77.22 (s) 46.43 (m, s) 47.63 (s)	77.22 – Renting of video tapes and disks 46.43 – Wholesale of other household goods (inc. wholesale of DVDs) 47.63 – Retail sale of music and video recordings in specialized Stores
Allied services	18.20 (s)	18.20 – Reproduction of recorded media

(s) Industry class shared between several copyright industries

(m) Mixed industry class including both copyright and non-copyright related industries

**Radio and Television**

Economic Activity	NACE 2	Description (Class)
Television program production activities	59.1 (s)	59.11 – Motion picture, video, and television program production activities 59.12 – Motion picture, video, and television program post-production activities 59.13 – Motion picture, video, and television program distribution activities
National radio and television broadcasting companies	60.10 60.20	60.10 – Radio broadcasting 60.20 – Television programming and broadcasting activities
Independent producers	59.11 (s)	59.11 – Motion picture, video, and television program production activities

(s) Industry class shared between several copyright industries

**Photography**

Economic Activity	NACE 2	Description (Class)
Studios and commercial photography	74.20 (s)	74.20 – Photographic activities

(s) Industry class shared between several copyright industries



### Software, Databases and Computer Games

Economic Activity	NACE 2	Description (Class)
Programming, development and design, manufacturing	58.2 62.0 (m)	58.21 – Publishing of computer games 58.29 – Other software publishing 62.01 – Computer programming activities 62.02 – Computer consultancy and computer facilities management activities 62.03 – Computer facilities management activities 62.09 – Other information technology and computer service activities
Wholesale and retail pre-packaged software (business programs, video games, educational programs, etc.)	46.51 (s) 47.41 (s)	46.51 – Wholesale of computers, computer peripheral equipment, and software (software). 47.41 – Retail sale of computers (inc. retail sale of non-customized software, including video games)
Database processing and publishing	63.1	6311 – Data processing, hosting, and related activities 6312 – Web portals
(s) Industry class shared between several copyright industries (m) Mixed industry class including both copyright and non-copyright related industries		

### Visual and Graphic Arts

Economic Activity	NACE 2	Description (Class)
Artists	90.0 (s)	90.01 – Performing arts 90.03 – Artistic creation
Art galleries and other wholesale and retail	90.02 (s) 90.04 (s)	90.02 – Support activities to performing arts 90.04 – Operation of arts facilities
Picture framing and other allied services	74.20 (s)	74.20 – Photographic activities
Service activities related to printing	18.12 (s)	18.12 – Other printing
Graphic design	90.03 (s) 18.12 (s) 74.10 (s)	90.03 – Artistic creation 18.12 – Other printing 74.10 – Specialized design activities (inc. graphic designers)
(s) Industry class shared between several copyright industries (m) Mixed industry class including both copyright and non-copyright related industries		

### Advertising

Economic Activity	NACE 2	Description (Class)
Agencies, buying services	73.11 73.20 (m)	73.11 – Advertising agencies 73.20 – Market research and public opinion polling (inc. marketing studies)
(m) Mixed industry class including both copyright and non-copyright related industries		

### Copyright Collecting Societies

Economic Activity	NACE 2	Description (Class)
Copyright Collecting Societies	94.12 (m)	94.12 – Activities of professional membership organizations (inc. associations of specialists engaged in cultural activities)
(m) Mixed industry class including both copyright and non-copyright related industries		

## 2. Partial Copyright Industries

Economic Activity	NACE 2	Description (Class)
Apparel, textiles, and footwear	14.1	14.11/12/13/14/19 – Manufacture of wearing apparel
	13.92	13.92 – Manufacture of made-up textile articles, except apparel
	15.20	15.20 – Manufacture of footwear
	46.41	46.41 – Wholesale of textiles
	46.42	46.42 – Wholesale of clothing and footwear
	47.51	47.51 – Retail sale of textiles in specialized stores
	47.7	47.71/72 – Retail sale of other goods in specialized stores (inc. clothing, footwear and leather goods in specialized shops)
	74.10 (s)	74.10 – Specialized design activities
Jewelry and coins	32.1	32.11/12/13 – Manufacture of jewelry, bijouterie, and related articles
	46.48	46.48 – Wholesale of watches and jewelry
	47.19 (m, s)	47.19 – Other retail sales in non-specialized stores (inc. jewelry)
	47.77	47.77 – Retail sale of watches and jewelry in specialized stores
	74.10 (s)	74.10 – Specialized design activities
Other crafts	94.99 (m, s)	94.99 – Activities of other membership organizations n.e.c. (inc. craft and collectors' clubs).
	47.19 (m, s)	47.19 – Other retail sale in non-specialized stores (inc. handicrafts)
	47.59 (m, s)	47.59 – Retail sale of furniture, lighting equipment, and other household articles in specialized stores (incl. handicrafts).
	74.10 (s)	74.10 – Specialized design activities
Furniture	31.0	31.01/02/03 – Manufacture of furniture
	46.47 (m, s)	46.47 – Wholesale of furniture, carpets, and lighting equipment
	47.19 (m, s)	47.19 – Other retail sale in non-specialized stores (inc. furniture)
	47.59 (m, s)	47.59 – Retail sale of furniture, lighting equipment, and other household articles in specialized stores
	74.10 (s)	74.10 – Specialized design activities
	77.29 (m, s)	77.29 – Renting and leasing of other personal and household goods (inc. furniture)
Household goods, china, and glass	23.1 (m)	23.10/11/12/13/14/19 – Manufacture of glass and glass products
	13.91 (m)	13.91 – Manufacture of knitted and crocheted fabrics
	14.3	14.31/39 – Manufacture of knitted and crocheted apparel
	16.29 (m)	16.29 – Manufacture of other products of wood
	25.99 (m)	25.99 – Manufacture of other fabricated metal products n.e.c.
	46.44 (m)	46.44 – Wholesale of china and glassware and cleaning materials
	47.52 (m)	47.52 – Retail sale of hardware, paints, and glass in specialized stores
	47.59 (m, s)	47.59 – Retail sale of furniture, lighting equipment, and other household articles in specialized stores (inc. china and pottery)
		4759 – Retail sale of electrical household appliances, furniture, lighting equipment, and other household articles in specialized stores
	74.10 (s)	74.10 – Specialized design activities
Wall coverings and carpets	13.93 (m)	13.93 – Manufacture of carpets and rugs
	17.24	17.24 – Manufacture of wallpaper
	47.53	47.53 – Retail sale of carpets, rugs, wall, and floor coverings in specialized stores
	74.10 (s)	74.10 – Specialized design activities
Toys and games	32.40	32.40 – Manufacture of games and toys
	46.49 (m, s)	46.49 – Wholesale of other household goods (inc. toys)
	47.19 (m, s)	47.19 – Other retail sale in non-specialized stores (inc. toys)
	47.65 (s)	47.65 – Retail sale of games and toys in specialized stores
	74.10 (s)	74.10 – Specialized design activities



Economic Activity	NACE 2	Description (Class)
Architecture, engineering, surveying	71.1 (m)	71.11/12 – Architectural and engineering activities and related technical consultancy
Interior design	74.10 (s)	74.10 – Specialized design activities (inc. interior decorators).
Museums	91.0 (m, s)	91.02/03 – Museums activities and preservation of historical sites and buildings

(s) Industry class shared between several copyright industries  
(m) Mixed industry class including both copyright and non-copyright related industries

### 3. Interdependent Copyright Industries

Economic Activity, Manufacture, Wholesale and Retail (Sales and Rental)	NACE 2 (Group)	Description (Class)
TV Sets, Radios, VCRs, CD Players, DVD Players, Cassette Players, Electronic Game Equipment, and Other Similar Equipment	26.30 (m)	26.30 – Manufacture of communication equipment (inc. radio and TV studio and broadcasting equip.)
	26.40	26.40 – Manufacture of consumer electronics (inc. TVs, VCRs, DVDs, Hi-Fis, consoles)
	46.43 (m, s)	46.43 – Wholesale of electrical household appliances (inc. radio and television equipment)
	46.49 (m, s)	46.49 – Wholesale of other household goods (inc. wholesale of stationery, books, magazines, newspapers, and musical instruments)
	47.43	47.43 – Retail sale of audio and video equipment in specialized shops
	77.29 (m, s)	77.29 – Renting and leasing of other personal and household goods (inc. relevant electronic equipment for household use)
	77.39 (m, s)	77.39 – Renting and leasing of other machinery, equipment, and tangible goods (inc. profess. radio and TV equip.)
Computers and Equipment	26.20	26.20 – Manufacture of computers and peripheral equipment
	46.51 (s)	46.51 – Wholesale of computers, computer peripheral equipment, and software (computers, peripherals and equipment)
	47.41 (s)	47.41 – Retail sale of computers (inc. computers)
	77.33 (m, s)	77.33 – Renting and leasing of other machinery, equipment, and tangible goods (inc. computers and computer peripheral equipment)
Musical Instruments	32.20	32.20 – Manufacture of musical instruments
	46.49 (m, s)	46.49 – Wholesale of other household goods (inc. musical instruments)
	47.59 (m, s)	47.59 – Retail sale of electrical household appliances (inc. musical instruments)
	77.29 (m, s)	77.29 – Renting and leasing of other personal and household goods (inc. instruments, scenery and costumes)

Economic Activity, Manufacture, Wholesale and Retail (Sales and Rental)	NACE 2 (Group)	Description (Class)
Photographic and Cinematographic Instruments	26.70 (m, s) 46.43 (m, s) 47.63 (m) 77.39 (m, s)	26.70 – Manufacture of optical instruments and photographic equipment 46.43 – Wholesale of electrical household appliances (inc. photographic and optical goods) 47.78 – Other retail sale of new goods in specialized stores (inc. photographic, optical, and precision equipment) 77.39 – Renting and leasing of other machinery, equipment, and tangible goods n.e.c. (inc. motion picture production equipment)
Photocopiers	28.23 (m) 46.66 (m)	28.23 – Manufacture of office machinery and equipment (inc. photocopy machines) 46.66 – Wholesale of other machinery and equipment (inc. office machinery and equipment)
Blank Recording Material	26.80 46.52 (m)	26.80 – Manufacture of magnetic and optical media 46.52 – Wholesale of electronic and telecommunications equipment and parts (inc. blank material)
Paper	17.1  17.2 (m, s)	17.11 – Manufacture of pulp, paper, and paperboard 17.12 – Manufacture of paper and paperboard 17.21 – Manufacture of corrugated paper and paperboard and of containers of paper and paperboard 17.23 – Manufacture of paper stationery 17.29 – Manufacture of other articles of paper and paperboard
(s) Industry class shared between several copyright industries (m) Mixed industry class including both copyright and non-copyright related industries		

#### 4. Non-Dedicated Support Industries

Economic Activity	NACE 2	Description (Classes)
General wholesale and retailing (G)	46 (s)	Division: 46 – Wholesale trade and commission trade, except of motor vehicles and motorcycles This Division includes the following classes: 46.1 – Wholesale on a fee or contract basis 46.4 – Wholesale of household goods (not prev. inc. in other Cls) 46.6 – Wholesale of machinery, equipment, and supplies (not prev. inc. in other Cls) 46.7 – Other specialized wholesale
	47 (s)	Division: 47 – Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods This Division includes the following classes: 47.1 – Retail sale in non-specialized stores (not prev. inc. in other Cls) 47.4 – Retail sale of information and communication equipment in specialized shops (not prev. inc. in other Cls) 47.5 – Retail sale of other household equipment in specialized stores (not prev. inc. in other Cls) 47.6 – Retail sale of cultural and recreation goods in specialized stores (not prev. inc. in other Cls) 47.7 – Retail sale of other goods in specialized stores (not prev. inc. in other Cls) 47.8 – Retail sale via stalls and markets 47.9 – Retail trade not in stores, stalls, or markets
General transportation (H)	49 50 51 52.2 53 79	Division: 49 – Land transport; transport via pipelines Division: 50 – Water transport Division: 51 – Air transport This Group is divided into the following Classes: 52.21/22/23/24/29 – support activities for transportation Division: 53 – Postal and courier activities Division: 79 – Travel agency, tour operator, and other reservation service and related activities
Information and communication (J)	61	Division: 61 – Telecommunications
(s) Industry class shared between several copyright industries SNA: 5.5, 5.6, 5.24, 10.98, 14.96, 15.148, 22.86		

## ANNEX V

### SAMPLE QUESTIONNAIRE

#### *Survey on Copyright Factors of Partial Copyright Industries*

465. (Checklist of Items to be Addressed When Undertaking a Sample Analysis)

466. Please be assured that all information provided will be kept confidential Please fill in the spaces provided or tick (p) in the boxes provided, where applicable.

Part A: Company Particulars

467. A1. Primary business activity: \_\_\_\_\_  
\_\_\_\_\_

468. A2. Turnover/Sales in 20xx

- |                          |    |                       |    |              |
|--------------------------|----|-----------------------|----|--------------|
| <input type="checkbox"/> | 1  | Less than \$10,000    |    |              |
| <input type="checkbox"/> | 2  | \$ 10,000             | to | \$19,999     |
| <input type="checkbox"/> | 3  | \$ 20,000             | to | \$ 49,999    |
| <input type="checkbox"/> | 4  | \$ 50,000             | to | \$ 99,999    |
| <input type="checkbox"/> | 5  | \$ 100,000            | to | \$ 199,999   |
| <input type="checkbox"/> | 6  | \$ 200,000            | to | \$ 499,999   |
| <input type="checkbox"/> | 7  | \$ 500,000            | to | \$ 999,999   |
| <input type="checkbox"/> | 8  | \$ 1,000,000          | to | \$ 1,999,999 |
| <input type="checkbox"/> | 9  | \$ 2,000,000          | to | \$ 4,999,999 |
| <input type="checkbox"/> | 10 | \$ 5,000,000 and over |    |              |

469. A3. Total workforce (including management) in 20xx (or currently)

470. Full-time personnel \_\_\_\_\_ persons

471. Part-time personnel \_\_\_\_\_ persons



Part B: Estimation of Copyright Activities

Copyright belongs to creative, intellectual, scientific, or artistic forms, or 'works' which include literary products (e.g. poems, theses, plays), movies, dances, musical compositions, audio recordings, paintings, drawings, sculptures, photographs, software, radio & television, and broadcasts. A copyright exists when an idea is put in a tangible form, such as a drawing, sheet music, photograph, a videotape, or a computer file. The copyright holder can produce copies of the work and sell them, and to sell or assign the copyright of the work to others.

472. B1. How important is **copyright** in the daily operations of your business?

1	Very significant	3	Slightly significant
2	Significant	4	Insignificant

473. B2. Does your business receive or make any form of payments for the use of intellectual rights in the form of royalties, patents or other licensing fees?

1	Yes	2	No → Please proceed to B.5
B3.	On average, what percentage of the annual total expenditure does your business spend on royalties, patents or other licensing fees?		%
B4.	In your opinion, what percentage of turnover in your business is attributable to copyright or creative activities? (For example, design fees).		%

474. B5. How many of the workforce in your business is involved in creative activities? Creative activities include product/service creation and development, for example 'A jewellery craftsman drawing the designs for his jewellery'.

475. Full-time personnel in creative activities \_\_\_\_\_ persons

476. Part-time personnel in creative activities \_\_\_\_\_ persons

Part C: Suggestion on Enhancing Creative Activities

## ACKNOWLEDGMENTS

The World Intellectual Property Organization expresses its thanks and appreciation of the invaluable contributions of the following persons: Prof. Dickson Nyariki, University of Nairobi, Kenya; Jeremy Thorpe, Partner, Pricewaterhouse Coopers, Sydney, Australia; Prof. Jose Luis Zofio, Dean, Department for Economic Analysis, Autonomous University of Madrid; Jukka Liedes, Director, Ministry of Education and Culture, Helsinki, Finland; Dr Kit Boey Chow, Singapore; Dr. Rimants Vaicenavicius, Director of Statistics, Bank of Lithuania; Prof. Robert G. Picard, Director of Research, Reuters Institute, University of Oxford, United Kingdom; Stephen Siwek, Principal, Economists Incorporated, Washington, D.C., United States of America; and Prof. Vanus James, University of Technology, Kingston, Jamaica.

WIPO also thanks the Government of Finland for its significant support and active involvement in the revision of this *Guide*.



## ENDNOTES

- 1 WIPO publication No 923.
- 2 For a detailed discussion of the economics of copyright law please consult the website of the Society for Economic Research on Copyright Issues (SERCI) at [www.serci.org](http://www.serci.org).
- 3 The terms *creative industries* and *copyright industries* are used interchangeably throughout the document.
- 4 Detailed statistics on the individual contribution of the copyright industries in each country can be consulted at [http://www.wipo.int/export/sites/www/copyright/en/performance/pdf/economic\\_contribution\\_analysis\\_2012.pdf](http://www.wipo.int/export/sites/www/copyright/en/performance/pdf/economic_contribution_analysis_2012.pdf)
- 5 Ibid.
- 6 For updated results, see Annex I of 'WIPO Studies on the Economic Contribution of Copyright Industries: An Overview'. [http://www.wipo.int/export/sites/www/copyright/en/performance/pdf/economic\\_contribution\\_analysis\\_2012.pdf](http://www.wipo.int/export/sites/www/copyright/en/performance/pdf/economic_contribution_analysis_2012.pdf).
- 7 See p. 5 of [http://www.wipo.int/export/sites/www/copyright/en/performance/pdf/economic\\_contribution\\_analysis\\_2012.pdf](http://www.wipo.int/export/sites/www/copyright/en/performance/pdf/economic_contribution_analysis_2012.pdf).
- 8 Ibid.
- 9 See [http://www.wipo.int/copyright/en/performance/country\\_studies.html](http://www.wipo.int/copyright/en/performance/country_studies.html).
- 10 See Annex 1 of the document summarizing the results of the WIPO studies, published at [http://www.wipo.int/export/sites/www/copyright/en/performance/pdf/economic\\_contribution\\_analysis\\_2012.pdf](http://www.wipo.int/export/sites/www/copyright/en/performance/pdf/economic_contribution_analysis_2012.pdf)
- 11 The use of the term 'copyright legal framework' also covers related rights.
- 12 At [www.wipo.int/treaties/documents/english/word/e-berne.doc](http://www.wipo.int/treaties/documents/english/word/e-berne.doc).
- 13 Other relevant instruments are the Convention for the Protection of Producers of Phonograms Against Unauthorized Duplication of their Phonograms – Phonograms Convention (Geneva, 1971), the Convention Relating to the Distribution of Program-Carrying Signals Transmitted by Satellite of 1973, and the Beijing Treaty on Audio-Visual Performances (2012) at <http://www.wipo.int/treaties/en/ip/beijing/>.
- 14 Art.2., Berne Convention for the Protection of Literary and Artistic Works.
- 15 Basic Notions of Copyright and Related Rights, WIPO/CNR/KTM/97/1.
- 16 See *WIPO Intellectual Property Handbook: Policy, Law and Use*, WIPO Publication No. 489 (E), ISBN 92-05-1004-8, Geneva, WIPO 2001, p. 43.
- 17 Independently of economic rights, international conventions also provide 'moral rights' which allow the author to take certain actions to preserve the personal link between himself and the work. Even if these rights are not economic by definition, they may acquire certain value in some countries which allow the waiver of such rights. At this stage, no universal methods are applied to measure the economic effects of moral rights, so they are not considered in the guide.
- 18 The list proposed here follows the language of the provisions of the Berne Convention and the WIPO Copyright Treaty. In national laws, the rights in many cases are referred to and categorized differently. Sometimes national law even grants a higher level of protection.
- 19 See Art.7 WCT and Arts. 9 and 13 WPPT.

- <sup>20</sup> See *WIPO Intellectual Property Handbook: Policy, Law and Use*, WIPO Publication No. 489 (E), ISBN 92-05-1004-8, Geneva, WIPO 2001.
- <sup>21</sup> The terms 'related rights' and 'neighboring rights' are used interchangeably.
- <sup>22</sup> Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired, or Otherwise Print Disabled, at [www.wipo.int](http://www.wipo.int).
- <sup>23</sup> WIPO has developed guidelines for measuring the economic, social, and cultural impacts of copyright on the creative industries. At the time of finalizing this publication, the guidelines are being tested in a pilot project.
- <sup>24</sup> Samuelson, Pamela 'Should Economics Play a Role in Copyright Law and Policy?' in Lisa N. Takeyama, Wendy J. Gordon and Ruth Towse (ed.), *Developments in the Economics of Copyright* (2005), ISBN:1-84376-930-1.
- <sup>25</sup> Handke, Christian, Stephan, Paul, and Towse, Ruth, 'Development of Economics of Copyright' in Drexl J. (ed.), *Research Handbook on Intellectual Property and Competition Law* (2008), ISBN:978-1845420475.
- <sup>26</sup> See the European Commission's Green Paper, Unlocking the Potential of Cultural and Creative Industries.
- <sup>27</sup> [http://ec.europa.eu/culture/documents/greenpaper\\_creative\\_industries\\_en.pdf](http://ec.europa.eu/culture/documents/greenpaper_creative_industries_en.pdf).
- <sup>28</sup> See Hartley, John, Defining the Creative Industries.
- <sup>29</sup> Creative Economy Report 2010:[http://unctad.org/fr/Docs/ditctab20103\\_en.pdf](http://unctad.org/fr/Docs/ditctab20103_en.pdf).
- <sup>30</sup> Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement) 1994, WIPO, Geneva, 1997 WIPO, Publication No. 223 (E), ISBN 92-805-0640-4, p. 14.
- <sup>31</sup> Samuelson, Paul A. and Nordhus, William D., *Economics*, Fourteenth Edition, 1992, ISBN 0-07-054879-X, p. 31.
- <sup>32</sup> For the sake of comprehensiveness, it should be recognized here that an academic debate still continues regarding the extent to which the principles applied to transactions with property rights on physical objects can be directly applied to intellectual property or to copyright in particular. Nonetheless, it should also be recognized that there are no sufficiently elaborated alternatives to this approach as yet. See Granstrand, Ove, *The Economics and Management of Intellectual Property: Towards Intellectual Capitalism*, Edward Elgar Publishing, Limited, UK, 1999, ISBN 1-85898-967-1, p. 21.
- <sup>33</sup> Meaning that consumption by one consumer excludes simultaneous consumption by others. However, there are exceptions to this general rule. For example, when a song is delivered via a public concert, it becomes a public good for the audience which attends the concert. However, this means of delivery is still a 'quasi-private' good since it is impossible for an unlimited number of people to attend the concert, and it is also very easy to exclude free riders (those individuals which consume without payment).
- <sup>34</sup> See Watt, Richard, *Handbook on the Economics of Copyright*, Edward Elgar, 2014, ISBN 9781849808521, Chapter XVI, pp. 287-310.
- <sup>35</sup> Towse, Ruth and Holzhauser, Rudi (ed.) (2002), *Economics of Intellectual Property Rights*, 4 Vols. in the Edward Elgar International Library of Critical Writings in Economics. Vol. 1 on Copyright.





<sup>36</sup> This concept could be summarized in the following three points:

1. The copyright as the resource enhances the value of the delivery good and represents a factor for the production of the final delivery good;
2. Since the only value of the delivery good is to make the copyright consumable, the delivery good on its own enhances the value of copyright, and the delivery good in a way is the factor for the production and the copyright is the final good; and
3. Since neither the copyright nor the delivery good can exist without one another they are complementary goods, in the same way that a glass increases the value of drinking water by making it more easily consumable and water increases the value of a drinking glass by giving it a logical use.

For a more detailed discussion see Watt, Richard, *Copyright and Economic Theory – Friends or Foes*, Edward Elgar Publishing Limited, Printed in Great Britain, 2000, ISBN 1-84064-312-9, p. 5.

<sup>37</sup> Samuelson, Paul A. and Nordhus, William D., *Economics*, 14th edition, 1992, ISBN 0-07-054879-X, p. 311.

<sup>38</sup> See Wendy Gordon, Chapter 4 in *Handbook on the Economics of Copyright*, Edward Elgar (ed.), 2014, ISBN 9781849808521, pp. 7-92.

<sup>39</sup> An economic good is a good which is scarce relative to the total amount of it which is desired. It must therefore be rationed, usually by charging a positive price (Samuelson and Nordhaus, p. 735). Copyright provides an incentive to produce the goods which are consumed, i.e. it is a trade-off between the higher price and the output of the goods.

<sup>40</sup> See Novos, Ian E. and Waldman, Michael, 'The Effects of Increased Copyright Protection: An Analytic Approach', *Journal of Political Economy*, Vol.92, No2, April 1984, pp. 236-246.

<sup>41</sup> Cultural goods are consumer goods which convey ideas, symbols and ways of life. They inform or entertain, contribute to building collective identity, and influence cultural practices. They are the result of individual or collective creativity and are reproduced and boosted by industrial processes and worldwide distribution. See [www.unesco.org/culture/industries](http://www.unesco.org/culture/industries).

<sup>42</sup> The monopoly in this case is not of a traditional type. In some literature the monopoly which copyright creates is assessed as no different from the monopoly which a worker has over his efforts. This is also a main reason for limiting copyright in time – in order not to enable the copyright holder to be a monopolist and price discriminator for an indefinite period of time.

<sup>43</sup> Externalities exist when private costs and benefits do not equal social costs or benefits. Samuelson, Paul A. and Nordhus, William D., *Economics*, Fourteenth Edition, 1992, ISBN 0-07-054879-X, p. 737.

<sup>44</sup> Watt, Richard, *Copyright and Economic Theory - Friends or Foes*, Edward Elgar Publishing Limited, Printed in Great Britain, 2000, ISBN 1-84064-312-9, p. 2.

<sup>45</sup> 'Value added' is understood to be the difference between the values of goods produced and the cost of materials and supplies used in producing them. See Samuelson, Paul A. and Nordhus, William D., *Economics*, 14th edition, 1992, ISBN 0-07-054879-X, p. 748.

- <sup>46</sup> See Olson, Mancur (1965), *The Logic of Collective Action, Public Goods and the Theory of Groups*, Cambridge, Harvard University Press, (Seventeenth printing, 1998), pp. 5-6.
- <sup>47</sup> Caves, Richard (2000), *Creative Industries*, Cambridge, Harvard University Press.
- <sup>48</sup> *Economic Importance of Copyright Industries in Finland, Finnish Copyright Industries in 1997*, Final Report, 2000, The Finnish Copyright Society and The Finnish Copyright Institute, ISBN 952-9855-19-6, Publication No. 20 (2000), Frenckell Printing Works Ltd, Helsinki, p. 5.
- <sup>49</sup> Secondary use raises some questions about the treatment of these goods in National Income Accounts because they are both consumer goods and consumer durables and, from the point of view of companies, copyrights are also capital assets.
- <sup>50</sup> For more reading on the subject see C. Shapiro, and H. Varian, (1999), *Information Rules*, Harvard Business School Press, Boston.
- <sup>51</sup> For more reading on the subject see Bettig, R. (1996), *Copyrighting Culture*, Westview Press, Boulder.
- <sup>52</sup> See Watt, Richard, 'Licensing and Royalty Contracts for Copyright: Review of Economic Research on Copyright Issues' (2006), Vol. 3(1), pp. 1-27, ISSN 1698-1359.
- <sup>53</sup> See Towse, Ruth (2001), *Creativity, Incentive and Reward: An Economic Analysis of Copyright and Culture in the Information Age*, Edward Elgar Publishing, Cheltenham.
- <sup>54</sup> See Towse, Ruth, *Cultural Economics, Copyright and the Cultural Industries*, proceedings from the conference The Long Run at Erasmus University, Rotterdam, February 2000, p. 113.
- <sup>55</sup> The term 'creative industries' was coined initially by the British Department for Culture, Media, and Sports (DCMS). The first version of the guide comprehensively reviews the early studies in this subject, WIPO (2003:10).
- <sup>56</sup> There is an ongoing academic debate on the distinctions between these two conceptualizations, such as Flew, T. and Cunningham, S., (2010) 'Creative Industries After the First Decade of Debate,' *The Information Society*, 26(2). In particular, a distinction is made between traditional 'cultural industries' (i.e. sectors related to high and popular culture: arts, music, theatre, and film (including their mass production)) and a wider 'creative industries' category which includes, for instance, software development and advertising, which show less connection with a traditional definition of arts or 'high culture'. The study by KEA (2006), *The Economy of Culture in Europe, Belgium*, broadly divides the 'cultural sector' into non-industrial activities producing non-reproducible goods and services and 'industrial sectors' producing cultural products aimed at mass reproduction.
- <sup>57</sup> See, for instance, UNESCO's Convention on the Protection and the Promotion of Cultural Expressions, 2005 (articles 4.4. and 4.5), Paris; UNESCO's The 2009 UNESCO Framework for Cultural Statistics (FCS), 2009, Paris; and UNCTAD's Creative Economy Report 2010, Geneva.
- <sup>58</sup> UNESCO, *The 2009 UNESCO Framework for Cultural Statistics (FCS)*, 2009, United Nations Educational, Scientific and Cultural Organization, Montreal. The first FCS dates back to 1986 and has been revised several times, reflecting the changing nature of the cultural sector's breadth. For example, the December 2007 draft of the final 2009 version did not include design and creative services (architecture and advertising) in the core cultural domain.



- <sup>59</sup> DCMS, *Creative Industries Economic Estimates*. Full statistical Report, 2011, Department for Culture, Media, and Sport, London.
- <sup>60</sup> FCS 2009, *op.cit.*, p. 24.
- <sup>61</sup> UNESCO, 2009, p. 23
- <sup>62</sup> Formally, the definition of industry adopted in this guide corresponds to that adopted in national accountancy and statistical classifications: 'An industry consists of a group of establishments engaged in the same, or similar, kinds of activity.' *System of National Accounts 2008*, United Nations, New York, 2009.
- <sup>63</sup> The term 'copyright materials' refers to works or other subject matter which are protected by copyright or related rights.
- <sup>64</sup> In economics this corresponds to a vertically integrated industry. Interestingly, the previous international standard industry classification, ISIC Rev.3.1, grouped some activities using this criterion, while its update in 2008, resulting in the fourth revision, ISIC Rev.4, reviews the application rules (classification methodology), and adopts value added as the main criterion of classification which is universally applied to all cases; i.e. the exception for vertically integrated activities was eliminated. This, however, will not have a large impact in the industry classifications and corresponding codes listed in the annexes since all activities can be individually identified and grouped into their relevant industry.
- <sup>65</sup> It has been shown that the vertical integration of production and distribution activities results in both larger profits for the single company performing the functions and lower market prices. That is, it results in a larger social welfare as the so-called 'double marginalization' problem, by which independent firms in both stages try to monopolize their respective demands, is solved.
- <sup>66</sup> Research work can be captured under the specific functional field it is involved in. For instance, some researchers may be authors, others could be working in educational institutions, and some may be involved in company research or advertising.
- <sup>67</sup> *International Standard Industrial Classification of All Economic Activities Revision 4, 2008* (Statistical Papers Series M No. 4, Rev.4), published by the Statistics Division of the Department of Economic and Social Affairs, United Nations, New York.
- <sup>68</sup> *Copyright Industries in the US Economy: The 2011 Report*, 2011, by Siwek, Stephen E., Economists Incorporated, prepared for the International Intellectual Property Alliance, Washington. ISBN 978-0-615-56025-0.
- <sup>69</sup> These categories are sometimes not broken down in national statistics.
- <sup>70</sup> Greetings cards.
- <sup>71</sup> Outlets dealing specifically with the distribution of newspapers, magazines, etc.
- <sup>72</sup> Libraries may represent the value added in distribution. But if they are consumers, they would come under revenues paid in the other categories.
- <sup>73</sup> Meaning theatrical distribution.
- <sup>74</sup> This refers to dedicated video rental outlets, which would exclude rental or sale of videos in major department stores.
- <sup>75</sup> Often, under allied services the reference is to activities which would be covered under related rights such as subtitling, dubbing, etc.
- <sup>76</sup> Services specifically related to radio and television.

- <sup>77</sup> Only the commercial side of photography. A more general issue here is the question of commercial and private use. Data concerning the non-commercial sector is usually not captured in the studies. In photography, for example, reproducing photos for personal use is not the same as commercial use. Photography has a non-commercial, private aspect and it cannot be included fully as a core industry.
- <sup>78</sup> In 2002, WIPO published six studies on the economic impact of the protection of non-original databases in developing countries. These can be consulted at <http://www.wipo.int/copyright/en/activities/databases.html>. The issue of international protection for non-original databases is currently being discussed by WIPO's Standing Committee on Copyright and Related Rights.
- <sup>79</sup> Such societies are rarely singled out in statistics. The value added distributed through them can be captured through the various thematic sub-sectors of the industry. Here the reference is to the value added by the societies themselves in the form of the salaries of the people working there.
- <sup>80</sup> Computer games, video games in particular, have grown in size to the extent that they are said to be rivaling the motion picture industry and surpassing the music industry in terms of overall revenue. For more information please see WIPO publication *Mastering the Game: Business and Legal Issues for Video Game Developers*, available at: [http://www.wipo.int/copyright/en/creative\\_industries/video\\_games.html](http://www.wipo.int/copyright/en/creative_industries/video_games.html).
- <sup>81</sup> See section 5.8, 2008 SNA Chapter 5: 'Enterprises, establishments and industries.'
- <sup>82</sup> <http://www.rankingthebrands.com/>. See also WIPO (2013), *Brands – Reputation and Image in the Global Marketplace*, Geneva.
- <sup>83</sup> Olsen, K. (2005), *Counterfeiting and Piracy: Measurement Issues*, OECD/WIPO. Background report for the Expert Meeting on Measurement and Statistical Issues, October, Geneva.
- <sup>84</sup> See, for instance, the report *Digital Britain* (2009), Department of Culture, Media, and Sport and Department for Business, Innovation, and Skills, London.
- <sup>85</sup> See *Information Economy – Sector Definitions Based on the International Standard Industry Classification (ISIC Rev.4)*, OECD document DSTI/ICCP/IIS(2006)2/FINAL.
- <sup>86</sup> Equipment may include infrastructure elements and facilities.
- <sup>87</sup> In many countries, fashion would be covered in statistics under apparel in textiles.
- <sup>88</sup> The value added under copyright to be separated from the value of the material.
- <sup>89</sup> Naturally, in different countries the copyright element in furniture will be different, but this will have to be established by the researcher.
- <sup>90</sup> Part of architecture is just service-oriented, such as project management and construction supervision, and therefore are not subject to copyright protection.
- <sup>91</sup> Here the reference is to two-dimensional engineering drawings, which in some countries enjoy copyright protection.
- <sup>92</sup> Only that portion which is attributable to works and other protected subject matter should be included, such as in architecture.
- <sup>93</sup> ISIC Rev.4 introduces a new section J 'Information and communications', including telecommunication activities (division 61) and information technology activities (division 62).



- <sup>94</sup> These desirable characteristics have been applied to other industries as well. See for example: Commission of the European Communities, Organization for Economic Cooperation and Development, World Tourism Organization & United Nations, 2008 *Tourism Satellite Account: Recommended Methodological Framework (TSA:RMF 2008)*.
- <sup>95</sup> See Chapter 4 in WIPO (2013), *WIPO Studies on the Economic Contribution of the Copyright Industries. Overview*, Geneva. Specific comparisons at country level can be found in the five volumes compiling national studies: *National Studies on Assessing the Economic Contribution of the Copyright based Industries*, Creative Industries Series (<http://www.wipo.int/freepublications/en/archive.jsp?cat=copyright>).
- <sup>96</sup> See Freeman, R. (2008), *Labour Productivity Indicators*, OECD Statistics Directorate, Paris.
- <sup>97</sup> IMF (2009), *Balance of Payments and International Investment Position Manual (BPM6)*, Washington D.C.
- <sup>98</sup> See particularly Table 10.4. Treatment of Intellectual Property, in the BMP6 (IMF, 2009, p. 176).
- <sup>99</sup> See Mankiw, N.G. (2012) *Macroeconomics*, Eighth Edition, Worth Publishers. ISBN 978-1429240024.
- <sup>100</sup> UN (2009), *System of National Accounts 2008*, United Nations, European Commission, International Monetary Fund, Organization for Economic Co-operation and Development, World Bank, New York. Chapter 16: 'Summarizing and Integrating the Accounts,' pp. 332-333.
- <sup>101</sup> UN (2009), *System of National Accounts 2008*, New York. Chapter 2. 'Overview. Rules of Accounting.'
- <sup>102</sup> For early work in the subject, later endorsed by the national accounts framework, see the handbook *Measuring the Non-Observed Economy*, Organization for Economic Co-operation and Development, International Monetary Fund, International Labor Organization and CIS STAT, 2002.
- <sup>103</sup> ILO (2013), *Measuring Informality: A Statistical Manual on the Informal Sector and Informal Employment*, The International Labor Organization, Geneva.
- <sup>104</sup> UN (2009), *System of National Accounts 2008*, New York. Chapter 25. Informal Aspects of the Economy.
- <sup>105</sup> See Massot, J.M. (2014), *A Study on the Contribution of Copyright and Related Rights-Based Industries to the National Economy of Argentina*, Buenos Aires.
- <sup>106</sup> The input-output tables, first developed in the 1930s by Wassily W. Leontief, are published today by most countries at regular intervals, some mapping the transactions among hundreds of sectors. Modern information technology supports still greater sectoral details as well as dynamic, multi-regional, and other complex data-intensive applications. The input-output technique allows for the study of the quantitative interdependence of sectors. It represents an ideal framework for national accounting, for integrating micro- and macroeconomic perspectives, and for incorporating engineering and labor market information into the economic analysis of technological change. For more information see UN (1999) *Handbook of Input-Output Table Compilation and Analysis*, Series F, No. 74, United Nations, New York.

- <sup>107</sup> For a country study making extensive use of input-output information see Castañeda, A. *et al.* (2008), 'The Economic Contribution of Copyright Industries in Colombia,' in WIPO (2008), *National Studies on Assessing the Economic Contribution of the Copyright Industries*, Creative Industries Series, No. 3, Geneva.
- <sup>108</sup> UN (2009), *System of National Accounts 2008*, New York. Chapter 29. Satellite Accounts and Other Extensions.
- <sup>109</sup> For different projects compiling multi-country input-output tables, see <http://www.oecd.org/trade/input-outputtables.htm> and <http://www.wiod.org>.
- <sup>110</sup> For instance, see Leo, K.M. *et al.*, 'The Economic Contribution of Copyright Industries in Singapore,' and Wall Comm., 'The Economic Contribution of Copyright Industries in Canada,' both in WIPO (2006), *National Studies on Assessing the Economic Contribution of the Copyright Industries*, Creative Industries Series, No. 1, Geneva; Castañeda, A. *et al.* (2008) 'The Economic Contribution of Copyright Industries in Colombia,' in WIPO (2008), *National Studies on Assessing the Economic Contribution of the Copyright Industries*, Creative Industries Series, No. 3, Geneva.
- <sup>111</sup> UNESCO (2005), *International Flows of Selected Cultural Goods and Services, 1994-2003*, United Nations Educational, Scientific and Cultural Organization, Institute for Statistics, Montreal.
- <sup>112</sup> See UNCTAD's Global Database on the Creative Economy.
- <sup>113</sup> See also NCAC, 'The Economic Contribution of Copyright Industries in China,' in WIPO (2011), *National Studies on Assessing the Economic Contribution of the Copyright Industries*, Creative Industries Series, No. 4, Geneva.
- <sup>114</sup> Siwek, S.E. (2013), *Copyright Industries in the U.S. Economy. The 2013 Report*, Economist Incorporated, Washington.
- <sup>115</sup> For example, see Disdier, A.C., Tai, S.H.T., Fontagne, L. and Mayer, T. (2010), 'Bilateral Trade in Cultural Goods,' *Review of World Economy*, 145, pp. 75-595.
- <sup>116</sup> *Balance of Payments and International Investment Position Manual*, BMP6 (IMF, 2009, p. 175). These are classified in category h. Charges for the use of intellectual property n.i.e.
- <sup>117</sup> *Ibid.*, p. 179. These are classified in category k, Personal, cultural, and recreational services.
- <sup>118</sup> See OECD (2001), *Measuring Productivity*, Organization for Economic Co-operation and Development, Paris; and Freeman, R. (2008), *Labor Productivity Indicators*, OECD Statistics Directorate, Paris.
- <sup>119</sup> It is called the 'current' because exported and imported goods and services are generally produced and consumed in the current period.
- <sup>120</sup> Exceptions are Canada and Australia. These consistently present trade deficits in the copyright industries, see Wall Comm, 'The Economic Contribution of Copyright Industries in Canada,' in WIPO (2006), *National Studies on Assessing the Economic Contribution of the Copyright Industries*, Creative Industries Series, No. 1, Geneva; Thorpe, J., 'The Economic Contribution of Copyright Industries in Australia,' in WIPO (2011), *National Studies on Assessing the Economic Contribution of the Copyright Industries*, Creative Industries Series, No. 4, Geneva.



- <sup>121</sup> This is the case for the manufacturing facilities (*'maquiladoras'*) operating in Mexico after the NAFTA free trade zone agreement came into force on 1 January 1994, see V. Márquez-Mees *et al.*, 'The Economic Contribution of Copyright Industries in México,' in WIPO (2007), *National Studies on Assessing the Economic Contribution of the Copyright Industries*, Creative Industries Series, No. 2, Geneva.
- <sup>122</sup> Siwek, S.E. (2009), *Copyright Industries in the US Economy: The 2003-2006 Report*, Economists Incorporated, Washington.
- <sup>123</sup> Barff, Richard and Prentice, L. Knight III (1988), 'Dynamic Shift-Share Analysis,' *Growth and Change*, 19 (2):1–10. doi:10.1111/j.1468-2257.1988.tb00465.x.
- <sup>124</sup> 2008 SNA, Preface, p. xlix.
- <sup>125</sup> See also Table 10.2, p. 203 of the 2008 SNA.
- <sup>126</sup> See Chapter 20, 2008 SNA.
- <sup>127</sup> See 2008 SNA, p. 92.
- <sup>128</sup> The issue of statistics, which is crucial for implementing the study, will be discussed in detail in Chapter 7.
- <sup>129</sup> References and quotes of industry classes are not included in full here in view of their volume. All relevant information regarding exclusions, links and overlaps with other classes can be found under the appropriate classification number at <http://unstats.un.org/unsd/class/family/default.asp>.
- <sup>130</sup> See International Family of Classifications and National Classifications at <http://unstats.un.org/unsd/class/family/default.asp>.
- <sup>131</sup> These classifications are compatible with ISIC.
- <sup>132</sup> The correspondence table between NACE Rev 2 and ISIC Rev.4 can be consulted at <http://unstats.un.org/unsd/cr/registry/regso.asp?Ci=71&Lg=1>.
- <sup>133</sup> See Ch. 1., p. 4, para. 1.24.
- <sup>134</sup> Gross Value Added (GVA) is usually taken to represent the true contribution that an industry makes to the national economy. This is the value of gross outputs less the value of inputs from other industries.
- <sup>135</sup> See Chapter VI in 'System of National Accounts 2008' [unstats.un.org/unsd/nationalaccount/docs/SNA2008.pdf](http://unstats.un.org/unsd/nationalaccount/docs/SNA2008.pdf).
- <sup>136</sup> For more information on the development of national statistical systems, see <http://unstats.un.org/unsd/dnss/>.
- <sup>137</sup> See 2008 SNA, para. 6.89.
- <sup>138</sup> GVA is normally estimated at wholesale prices. However, the gross output of an industry overestimates an industry's contribution to national income because it includes the value of inputs produced by other industries as well.
- <sup>139</sup> Intermediate consumption does not include expenditures by enterprises on valuables consisting of works of art, precious metals and stones, and articles of jewellery fashioned out of them. Intermediate consumption includes the value of all the goods or services used as inputs into ancillary activities such as purchasing, sales, marketing, accounting, data processing transportation, storage, maintenance, security, e.t.c. For more complete discussions on this item see paragraphs 6.213– 6.215 of the 2008 SNA.
- <sup>140</sup> See 2008 SNA, paragraphs 7.9 – 7.14.
- <sup>141</sup> See 2008 SNA, paragraphs 7.39 – 7.42.

- <sup>142</sup> As value added is intended to measure the additional value created by a process of production, it ought to be measured net, since the consumption of fixed capital is a cost of production. However, one should be aware that consumption of fixed capital can be difficult to measure in practice and it may not always be possible to make a satisfactory estimate of its value and hence of net value added. The 2008 SNA takes due note of this fact. For more details see paragraph 6.9 of 2008 SNA. See also paragraphs 10.25, 6.240 and 10.155 – 10.156 of 2008 SNA.
- <sup>143</sup> Taxes on production consist of taxes payable on goods and services when they are produced, delivered, sold, transferred or otherwise disposed of by their producers plus other taxes on production, consisting mainly of taxes on the ownership or use of land, buildings, or other assets used in production, or on the labor employed, or the compensation of employees paid. See 2008 SNA, paragraph 7.72.
- <sup>144</sup> See 2008 SNA paras. 7.98 and 14.82.
- <sup>145</sup> *Copyright White Paper – A view from the perspective of copyright industries*, Copyright Research and Information Center 2001, JCI series, Tokyo, p. 32.
- <sup>146</sup> See 2008 SNA, p. 24.
- <sup>147</sup> See 2008 SNA, Table 2.2, p. 24.
- <sup>148</sup> At basic prices.
- <sup>149</sup> Net.
- <sup>150</sup> This indicator may not always be directly reported or may only be reported after it has been obtained through the application of other methods.
- <sup>151</sup> Subsidies may be provided to a limited number of industries, according to budgetary priorities and practices, and the formula could be adapted to the specific industries.
- <sup>152</sup> Goods are understood as physical objects for which a demand exists, over which ownership rights can be established, and the ownership of which can be transferred from one institutional unit to another by engaging in transactions on markets. See also 2008 SNA, paragraph 6.15.
- <sup>153</sup> For some of the sectors, comprising the industries with less dependence on copyright, an even smaller number of companies can be sampled.
- <sup>154</sup> See Annex V for samples of questionnaires that can be used for the study.
- <sup>155</sup> See Annex VI (C) Estimating Copyright Factors.
- <sup>156</sup> Similarity could be established using World Competitiveness Reports, GDP indicators, etc. See, for example, [www.imd.ch/wcy](http://www.imd.ch/wcy) or [www.weforum.com](http://www.weforum.com).
- <sup>157</sup> National Studies on Assessing the Economic Contribution of the Copyright-Based Industries, Creative Industries Series 1 (2006).
- <sup>158</sup> Copyright-related activities should not be excluded from the survey on the grounds that their market is small, because the survey has to try to capture all economic effects produced by copyright in the national economy. Furthermore, not including a share of a specific market in the study excludes the possibility of making important conclusions about the growth rates in subsequent surveys.
- <sup>159</sup> For example, for domestic reasons one may wish to avoid comparisons between sectors representing related activities. This issue is linked to the overall objectives of the study and the level of detail should be decided by the research team.



- <sup>160</sup> See 2008 SNA, paras. 14.1-14.166.
- <sup>161</sup> See 'National Accounts: A Practical Introduction' at [http://unstats.un.org/unsd/publication/SeriesF/seriesF\\_85.pdf](http://unstats.un.org/unsd/publication/SeriesF/seriesF_85.pdf). In addition, a number of publications in this regard are prepared by the United Nations Statistics Division and other international agencies and can be reviewed at <http://unstats.un.org/unsd/nationalaccount/pubsDB.asp?pType=2>.
- <sup>162</sup> <http://www.ilo.org/global/statistics-and-databases/classifications/lang--en/index.htm>.
- <sup>163</sup> Foreign trade statistics are produced regularly almost everywhere and are widely used for international comparisons.
- <sup>164</sup> See 'European system of accounts,' ESA 2010, Eurostat, Luxembourg: Office for Official Publications of the European Communities, 1996, ISBN 978-92-79-31242-7, Brussels. Luxembourg, 2013, or see [http://epp.eurostat.ec.europa.eu/cache/ITY\\_OFFPUB/KS-02-13-269/EN/KS-02-13-269-EN.PDF](http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-02-13-269/EN/KS-02-13-269-EN.PDF).
- <sup>165</sup> For more information see <http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home>.
- <sup>166</sup> Here we refer mainly to universal sources.
- <sup>167</sup> Culture and communication statistics cover book production, broadcasting, cultural goods, cultural paper (newsprint, printing, and writing paper), films and cinemas, libraries, museums, and the press, at [www.unesco.org](http://www.unesco.org).
- <sup>168</sup> WTO annual reports can also provide relevant information. See [www.wto.org](http://www.wto.org).
- <sup>169</sup> See, for example, the UN Statistical Yearbook, monthly bulletins of statistics, UN Common Database, International merchandise statistics, yearbook of labor statistics (at <http://unstats.un.org/unsd/pubs/>), international financial statistics (at [www.imf.org](http://www.imf.org)) or at [www.worldbank.org](http://www.worldbank.org).
- <sup>170</sup> See [www.trademap.org](http://www.trademap.org).
- <sup>171</sup> As stated in Chapter 6, a partial solution in these cases may be provided by employment statistics and finally by exports.
- <sup>172</sup> See 2008 SNA, pp. 302-327.
- <sup>173</sup> For example, in government statistics, the export of a motion picture is reflected as an export of a developed film caster and this does not even remotely show the scale of the economic importance of the motion picture industry and does not help us to get the real sales figures of the industry.
- <sup>174</sup> See 2008 SNA, p. 274.
- <sup>175</sup> See 2008 SNA, para. 13.36, p. 263.
- <sup>176</sup> See 2008 SNA paragraph 13.37. p. 264.
- <sup>177</sup> See STD/NA (2002)35, OECD Meeting of National Accounts Experts, Paris, 8-11 October, 2002, p. 3.
- <sup>178</sup> See 2008 SNA, p. 256, paras. 10.99 and 10.100.
- <sup>179</sup> See pp. 150-163.
- <sup>180</sup> See OECD Handbook on Deriving Capital Measures of Intellectual Property Products <http://www.oecd.org/std/na/44312350.pdf>.
- <sup>181</sup> See p. 278.
- <sup>182</sup> See UN Statistical Commission, 33rd Session, 5-8 March 2002, Room document supporting E/CN.3/2002/21.

<sup>183</sup> *Ibid*, p. 8.

<sup>184</sup> See E/CN.3/2002/21.

<sup>185</sup> This table provides the specific codes of the copyright-based industries according to the 2008 EU NACE Rev.2 classification (statistical classification of economic activities in the European Community). Both the CPA (The Classification of Products by Activity) and the PRODCOM (The European Community Statistical Survey of Industrial Production) present the same structure that NACE up to the fourth level (classes) disaggregation.

For more information contact WIPO at [www.wipo.int](http://www.wipo.int)

**World Intellectual Property Organization**

34, chemin des Colombettes

P.O. Box 18

CH-1211 Geneva 20

Switzerland

Telephone:

+4122 338 91 11

Fax:

+4122 733 54 28