World
Intellectual
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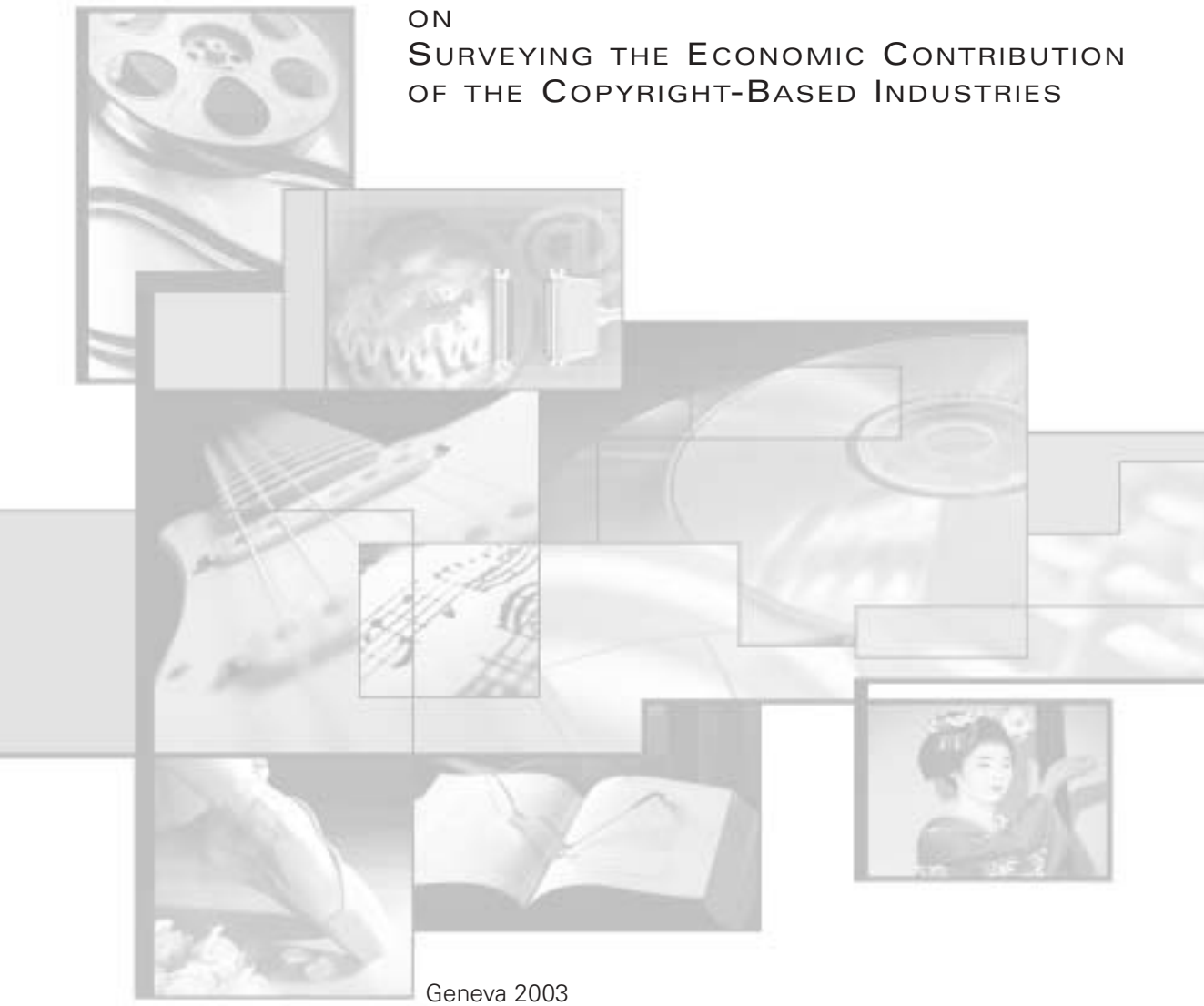
Organization

>> Guide

on
Surveying the Economic Contribution
of the Copyright-Based Industries



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PREFACE

Traditional perspectives on copyright have changed significantly since the main pillar of the international copyright system, the Berne Convention, was concluded in 1886. More recently, with the adoption of the two WIPO Internet treaties in 1996, many changes have taken place in the copyright field, as result of the digital technology, opening new horizons for composers, artists, writers and others to use the Internet with confidence to create, distribute and control the use of their works within the digital environment. Once perceived as an obscure legal concept, today copyright is increasingly relevant to the everyday lives of an unprecedented number of people. In the global economy, copyright protection creates the basis for entire industries such as those for music, publishing, film, broadcasting and software, and affects as well many other business activities. Thus copyright is a powerful source of economic growth, creating jobs and stimulating trade.

Although copyright, through the cultural and information industries has a far-reaching and positive impact on the economy, the often hidden copyright-related components of various industries and activities are generally not clearly identified in statistical and economic terms. The present publication aims to redress this situation by outlining a methodology for identifying the contribution of copyright-based industries to the national economy. *The Guide* on Surveying the Economic Contribution of the Copyright-Based Industries (*The Guide*) will help to foster better understanding of the role of intellectual property in economic development by suggesting approaches for measuring the contribution of copyright-based activities in economic terms. It distills a wide range of national and regional experiences in this field. It is hoped, that by highlighting the economic contribution of the copyright protection system, awareness among national policy and decision-makers about the economic importance of copyright will be raised and, thereby, they will be encouraged to integrate a copyright perspective into national development strategies.

The Guide contains information and recommendations for research teams and copyright professionals embarking on the stimulating and challenging study of the contribution of the copyright-based industries to the national economy. This publication is intended as a practical tool to facilitate national and regional surveys. *The Guide* lays out the thrust of the main legal, economic and statistical concepts, relevant to the survey. While general in its basic approach, it contains some indispensable technical detail. *The Guide* will be tested in specific surveys and will be further refined in accordance with the results obtained.

WIPO's long-standing commitment to the protection of copyright has for many years been largely confined to its legal and technical aspects. This publication marks its commitment also to realizing the economic benefits of effective copyright protection.

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List of Acronyms

A&R	Artists and Repertoire
CPA	Classification of Products by Activity
EU	European Union
EUROSTAT	Statistical Office of the European Communities
FTE	Full-time equivalent
GTAP	Global Trade Analysis Project
GDP	Gross Domestic Product
GVA	Gross Value Added
ISIC	International Standard Industrial Classification
IMF	International Monetary Fund
ISWGNA	Inter-Secretariat Working Group on National Accounts
IVA	Industry Value Added
NACE	General Industrial Classification of Economic Activities
NAICS	North American Industry Classification System
OECD	Organization for Economic Co-operation and Development
PRODCOM	Community Statistical Survey of Industrial Production
R&D	Research and Development
SIC	Standard Industrial Classification
SNA	System of National Accounts
TRIPS Agreement	Agreement on Trade-Related Aspects of Intellectual Property Rights
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
WCT	WIPO Copyright Treaty
WIPO	World Intellectual Property Organization
WPPT	WIPO Performances and Phonograms Treaty
WTO	World Trade Organization

INTRODUCTION

1. Traditionally copyright has been considered and studied mostly from its legal perspective. The nature of copyright, the scope of its protection, enforcement and infringement have been the object of extensive research. Only recently the focus of study has shifted towards the economic characteristics of copyright. The fact that copyright has a role in our everyday lives in practically all fields – production, distribution and consumption becomes increasingly evident. The growing interest in copyright is generated also on the business side where licensing, investment, trade and transfers have attracted a fair amount of attention. Copyright today is seen as more than a legal system providing a secure and stable environment for creative activity in different markets.

2. This growing interest is linked to a number of factors. First, the interest in copyright is part of the increased recognition of the role of intellectual property (IP) in post-industrial society, where more attention is being paid to non-material production factors. Copyright, in particular, is important for the growth and productivity of industries, employment and investment based on creativity and information. Secondly, the scope of the subject matter for copyright protection has expanded, thanks to digital technology. The economic gains from software, multimedia and different technology-based products have reached very significant levels. Thirdly, as a result of the digital revolution, copyright protected material now features as one of the main components in electronic commerce and digital transactions.

3. In recent decades certain countries and scholars have undertaken studies which reflect and provide substantial evidence for the tremendous contribution of copyright and related rights, through the cultural and information industries, to the national economy. Other countries have expressed interest in launching similar studies, but have been unable to do so, not least because of methodological constraints and insufficiency of reliable data. Whenever surveys and measurement of the benefits, value and growth of the copyright and related rights-based industries have taken place, strong evidence has been obtained of the intellectual capital and comparative advantages of the countries studied. In his annual message at the beginning of 2002 the Director General of WIPO explained the importance of understanding the impact of intellectual property on economy in the following way – "In this 21st Century, intellectual property is a powerful driver of economic growth. When linked to the development of human capital, it results in educated, skilled and motivated individuals and becomes a dynamic combination in terms of stimulating creativity and innovation, generating revenue, promoting investment, enhancing culture, preventing "brain drain", and nurturing overall economic health."[1] WIPO's recent activities have progressively placed emphasis on the economic analysis of IP in different program activities. However, in response to the desire expressed by many member states the Secretariat has recognized an urgent need for taking more specific approach by developing a useful instrument to assist interested member States in conducting surveys to analyze the contribution of intellectual property to the national economy. Against this background and in response to the interest expressed by countries, the World Intellectual Property Organization (WIPO) has prepared this Guide on surveying the economic contribution of the copyright and related rights-based industries.

4. The purpose of *the Guide* is threefold:

- to summarize the existing experience in surveying the copyright and related rights-based industries;

- to develop a practical instrument in the form of guidelines, recommendations and survey methods to be considered and applied when undertaking future surveys with regard to the size and economic contribution of a nation's creative and information sector; and

- to establish a basis for comparison of future surveys built on reliable data and common methodologies.

5. In order to achieve these goals, the Organization convened in 2002 a Working Group of well-known economists, experienced in the preparation of studies on the subject or in economic research on the copyright-based industries. The members of the group were Mr. Jeremy Thorpe (Australia), Mr. Antonio Marcio Buainain (Brazil), Mr. Ahmed Ghoneim (Egypt), Mr. Robert Picard (Finland), Mr. Jules Theeuwes (Netherlands), Dr. Ruth Towse (Netherlands), Professor Richard Watt (Spain) and Mr. Stephen Siwek (Unites States of America). The Working Group met in session in Helsinki, Finland, in July 2002, to discuss the substance of *the Guide*. The meeting was chaired by Mr. Jukka Liedes, Special Adviser to the Government of Finland and Chairman of the WIPO Standing Committee on Copyright and Related Rights, who has for many years been involved with national studies on the matter and is a leading figure in international copyright. In preparing *the Guide*, various sources, including academic research, official publications and statistics, have also been used.

6. This important work would not have been possible without the active involvement of the Government of Finland. WIPO also expresses its deep appreciation of the important contributions of the above-mentioned experts. Their practical insights, scholarly perspective and written suggestions have been an invaluable asset and a condition for the success of this project.

7. *The Guide* is designed to provide practical guidance to all countries wishing to survey and measure the size of their creative and information sector. Developing countries, countries in transition and developed countries may find useful guidelines and references in this regard. It is hoped that this Guide would facilitate national and international research and comparison among studies, lead to new levels of research and possibly to a new level of awareness of the economic significance of copyright protection. Hence this would assist governments in crafting appropriate strategies in support of creative work through the establishment of an enabling environment and infrastructure. Future surveys and their results should lead to better understanding of copyright both by political leaders and policy makers as well as by the general public.

8. The scope of *the Guide* is confined to surveying the economic contribution of the copyright-based industries and providing quantifiable characteristics of this contribution. They address three main indicators of the size of these industries – the value added generated by them, their share in employment and their contributions to foreign trade. It outlines the methodology of the survey, justifies the choice of indicators, describes their characteristics and elaborates on existing approaches to their measurement. At the same time *the Guide* does not discuss fields where more research is needed on the national and international levels, such as the economic impact of copyright law itself, measuring the social effects of copyright, the valuation of copyright assets of enterprises or the assessment of the effects of copyright piracy. These topics would form the subject of possible future publications.

9. The structure of *the Guide* provides the readers with an introductory section (Chapters 1 to 3) where some lessons from previous studies are drawn, basic legal notions are introduced and the economic fundamentals of copyright are outlined. It offers some theoretical

background for anyone wishing to launch a practical survey. The second section of *the Guide* deals with the description of the copyright-based industries and their functional division (Chapter 4) and with the framework of the survey (Chapter 5). Section three (Chapter 6) describes the steps to follow when undertaking the study itself. The last part of *the Guide* (Chapter 7) deals with the identification of appropriate information resources. Finally, the publication offers a glossary of the most relevant terminology used in the text[2].

10. The recommendations contained in *the Guide* have been developed against the background of existing research experience, United Nations statistical methodologies and other international efforts in this field. However, an economic study is not a merely statistical exercise even though information resources are of paramount importance. It should also support policy goals and public awareness. A careful multidisciplinary approach from the time a first study is undertaken in a particular country is recommended, so that a firm foundation is laid for subsequent studies. The quality of the team that will perform the survey will be decisive for the credibility of the final product and will facilitate work in areas where scarce information is available and professional judgements are indispensable.

11. The research teams undertaking the study will face a number of challenges that are indicated in *the Guide*. International cooperation will be particularly helpful, benefiting from the experience of studies done in different countries. WIPO strongly encourages the establishment of an international network with regard to sharing results and experiences and refining study methodology.

12. The further promotion of studies on the economic contribution of the copyright-based industries requires institutional and financial support. In this regard WIPO will also facilitate and support international cooperation among its Member States at both governmental and non-governmental levels.

13. Being the first of their kind, the guidelines in this publication are not exhaustive. In the search for universally applicable patterns, country and region – specific situations and experiences have not been addressed. It is the hope of WIPO that any future research on the economic contribution of the cultural industries would make use of these guidelines while adapting them to local conditions. With the development of future studies and research the guidelines in this publication will be tested and further refined. Any comments and proposals for improvement will be highly appreciated by WIPO.

Chapter 1: Experience from Existing Studies

1.1. An Overview

14. The economic analysis of the doctrines in copyright law has been the subject of research by scholars interested in the intersection between law and economics. Copyright law and economic theory developed as a result of industries operating on the basis of copyright protection. As such industries grew bigger researchers and even more so practitioners became equally interested in linking theory with practice and showing how the principle of copyright protection had contributed to establishing significant sectors of the economy which were expanding more quickly than the rest of the economy.

15. The great merit of the surveys on the copyright-based industries carried out so far in various countries, is that they have raised public and political awareness of the issue and underlined the great potential of the creative and information sector. This has made an even stronger case for proposing common guidelines to be applied in future studies.

16. The interest in quantifying the contribution of the copyright-based industries to the national economy dates back from the beginning of the second half of the twentieth century.[3] However, only in the seventies did the first complete studies appear in Canada and Sweden, followed by a series of studies in the 1980's in the United States of America, New Zealand, the United Kingdom, the Netherlands, Germany and Austria. Since the 1990's the studies have reached a higher level of comprehensiveness and broadened their geographical scope (Finland, Japan and Latin American countries).

17. Countries like Finland, the Netherlands and the United States of America started to produce surveys systematically, which gave a new dimension and credibility to discussions on the importance of copyright and on the size and contribution of the copyright-based industries to economic growth. Gradually, the institutions involved in these studies were equipped with more qualified professional staff, research facilities and modern methods.

18. A number of studies are currently under preparation in some Arab, Asian and European countries, some focusing attention on the copyright-based industries in a broader regional perspective. Those studies, as well as any future surveys, should build on previous experience and use improved research techniques and data.

19. Such growing interest in the subject therefore renders this *Guide* particularly timely, especially as it will make it possible for meaningful comparisons to be made between different studies.

20. A list of the more exhaustive studies published so far is reproduced in Table 1.1., below. It should be pointed out that some other countries have studied certain sectors or aspects of their cultural industries – social, economic, market factors or simply statistical aspects, but due to their limited scope those studies have not been included in the table below.[4]

Table 1.1. Studies on the Copyright-Based Industries

N°	Country	Title	Year of publication	Commissioned by	Performed by
1.	Argentina Brazil Chile Paraguay Uruguay	Economic Importance of Activities Protected by Copyright[5]	2001	WIPO	Coordinated by the Institute of Economics UNICAMP
2.	Australia	The Economic Contribution of Australia's Copyright Industries[6]	2001, previous studies in 1981,1986, 1993	Australian Copyright Council and the Center for Copyright Studies	The Allen Consulting Group
3.	Austria	The Economic Importance of the Copyright Industries in Austria[7]	1989 (data on 1986)	Copyright Societies and Government	Vienna University of Economics and Business Administration
4.	Canada	Copyright in Canada[8]	1977 (data on 1971), 1980	Ministry of supplies and services	A. A. Keyes and C. Brunet
5.	Finland	Economic Importance of Copyright Industries in Finland[9]	2000, previous study in 1991	The Finnish Copyright Institute[10]	Turku School of Economics and Business Administration
6.	Germany	The Economic Importance of Copyright in the Federal Republic of Germany[11]	1989 (data on 1986)	Parliament of the Federal Republic of Germany	IFO Institute for Economic Research, Munich
7.	Japan	Copyright White Paper[12]	2001	Copyright Research and Information Center	Japan Copyright Institute, Copyright Research and Information Center
8.	Netherlands	The Economic Importance of Copyright in the Netherlands in 1998[13]	2000, previous studies in 1985, 1989,1993, 1997	Dutch Copyright Federation	SEO Amsterdam Economics
9.	New Zealand	The Economic Contribution of Copyright-based Industries in New Zealand[14]	1992 (data on 1988), 1981/2	Copyright Council of New Zealand	Copyright Council of New Zealand
10.	Norway	The Economic Importance of Copyright Industries in Norway[15]	2002	Norwegian Ministry of Culture and Church Affairs	Turku School of Economics and Business Administration
11.	Sweden	Impact of Copyright Law on the Economy of Sweden[16]	1982 (data on 1978)	Copyright Law revision Committee	Swedish Central Bureau of Statistics
12.	United Kingdom	The Economic Importance of Copyright[17]	1993 (data on 1990), 1985 (on 1982)	Common Law Institute for Intellectual Property	Common Law Institute for Intellectual Property
13.	United States of America	Copyright Industries in the US Economy[18]	2002, previous studies in 1977,1982, 1989, 1990, 1991, 1992, 1994 and annually since then	International Intellectual Property Alliance[19]	Economists Incorporated

21. Since most of the studies listed above speak for themselves and have been analyzed in academic literature, only the following observations on general methodology, which are in no way exhaustive, are mentioned below.

1.2. Institutional Interest

22. Government institutions commissioned the studies in only four of the cases, while in the remaining thirteen cases studies were commissioned by academic institutions, non-governmental and intergovernmental organizations. The commissioning of the studies shows thus a strong interest in them by the executive, the academic and lobbying institutions, representing the respective copyright industries. They indicate a trend of increasing interest by government and non-governmental institutions, while in the beginning academic and public institutions were at least equally interested. This points to a higher awareness among policy-makers of the role of copyright in social and economic development.

23. The majority of the studies were carried out by academic institutions engaged in economic research when four of them were done by consultancy and research companies. The authorship shows a desire for making wide use of independent research and objective analysis, carried out by experts enjoying high credibility.

24. All studies offered the conclusion that the contribution of the copyright-based industries has been higher than generally perceived and had been used to lobby parliamentary and government institutions to pay more attention to the development of copyright law as well as design appropriate government policies. In a number of cases, the results of the studies had facilitated the adoption of new copyright legislation. In others they had provoked academic interest and debate. The studies had often been used as a point of departure in further national research or triggered interest outside their national boundaries. They had all been quoted internationally, which had added to the need for more international cooperation in the matter. Comparisons between studies had primarily been made to track the relative domestic performance of the copyright-based industries and compare it to other countries, particularly those with similar economic conditions.

1.3. Scope

25. International comparison has in most of the cases been an important goal, especially with the increase in the number of studies. Comparisons were actually made in some of the studies, but those had been limited in view of the differences in the concepts and methodologies applied. Those differences had spanned from the objectives and the uses of the surveys to the choice of indicators, the standards applied and basis for the research. At times double counting has resulted in exaggerating the contribution of copyright, while in some studies this contribution has been underestimated. This fact had been widely recognized by the researchers themselves and had rendered comparisons of doubtful value thus highlighting the need for establishing some common guidelines for future studies.

26. Some of the differences observed in the studies relate to terminology, statistical treatment, and differences in copyright protection accorded by the national copyright laws. In certain cases, the differences were enhanced by the particular academic background of the researcher or institution or on the type of information resources available. While these differences do not necessarily affect the quality of the studies, they make international comparison even more difficult.

27. The scope of the studies has changed over the years. This has to do, on the one hand, with the evolution of copyright law (for example, software protection, digital technology, etc. were not taken into account in earlier studies). On the other hand, the scope changed with the development of analytical methods.

28. In terms of periodicity it is evident that national survey carried out periodically yields much more interesting results. This gives a dynamic perspective to the survey and places the copyright-based industries in the framework of the development of the entire economy. The results in consecutive studies in a given country (United States of America, the Netherlands, Finland, etc.) have inevitably shown that growth of these industries is higher than the overall economy's growth rate, a higher employment rate than the average employment rate for the other sectors of the economy and an increasing proportion of the overall foreign trade (where this indicator has been studied).

29. The studies usually used statistics which were on average 2 to 3 years old (in some cases even older, while in the US study the statistics used were a year old), depending on the way statistics are compiled nationally. In order to make international comparisons in the future, it would be advisable that future surveys base their findings on statistics of the same year. Over time, this could lead to the creation of a global economic database for copyright-based industries. In this way it, will be possible to follow also regional trends and design appropriate support policies.

1.4. Organizational Aspects

30. The studies were traditionally performed by relatively small teams of researchers, predominantly economists. Depending on the purposes of the various surveys, the teams included also statisticians, sociologists, lawyers and other professionals. The teams were formed depending on the objectives of the studies, the budget available or the experience acquired in previous surveys in the same country. The time factor also influenced the selection of the team.

31. An important fact about the existing surveys is that they were seldom published in full and in most cases, only summaries were distributed. This was done for different reasons – focus of the presentation, explicit wish of the commissioning institution or simply budgetary reasons. One of the consequences of this is that there has not been sufficient clarity on the exact methodology applied and it had constrained international sharing of good practices and experiences gained in conducting surveys or studies elsewhere. Needless to say, since surveys targeted different audiences, they stressed different elements and this further discouraged international comparisons. The time span for the preparation of the surveys varied from 3 months to 1 year, depending on the experience of the team, the statistics available and the budget.

Chapter 2: Basic Legal Notions

32. The international copyright system provides a broad variety of rights. Surveying the copyright-based industries implies studying the process and activities related to the exercise of these specific rights. It has to be borne in mind that the national legislative systems sometimes may provide protection for the same activity under different laws in different countries. Therefore an important preparatory step when undertaking the study should be a comprehensive review of the existing legal framework of protection of copyright and related rights. In spite of possible differences in national copyright laws, those are usually not of such a scale that would affect the comparability of the results of the studies internationally, especially since 150 countries are bound by the legal provisions and rights recognized by the Berne Convention for the Protection of Literary and Artistic Works, the foundation of the international copyright legal system.[20]

33. In order to undertake a survey on the copyright-based industries, it is imperative that the researcher has an adequate understanding of the existing copyright legal framework in which a study is to be carried out.[21] Copyright is about rights and the protection of these rights constitutes the essential basis for building entire industries and their related activities. Copyright protection has been an indispensable factor in the establishment and development of the copyright-based industries over time. Understanding the issue of the basic legal notions in copyright protection will help to build better assumptions as to which economic activities should be studied and surveyed.[22] The need for a copyright-based approach is of paramount importance, since it provides the correct conceptual framework for identification of the subject matter to be studied, the collection of statistics and their analysis.

2.1. The Concept of Copyright

34. The concept of copyright and related rights is defined in each country's legislation. However, the basic concepts in almost all laws are largely consistent with the provisions of the Berne Convention for the Protection of Literary and Artistic Works, the International Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations (commonly known as the Rome Convention), the Agreement on Trade-Related Aspects of Intellectual Property Rights (commonly known as the TRIPS Agreement), and the WIPO Copyright Treaty of 1996 and the WIPO Performances and Phonograms Treaty of 1996 and some other relevant international conventions.[23]

35. 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."[24] The expression "literary and artistic works" is to be understood, for the purposes of copyright protection, 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 works protected under most national copyright laws is reproduced in Table 2.1.

36. Unlike 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 property rights in literary and artistic works against those who "copy" or otherwise take and use the form in which the original work was expressed by the author.[25]

Table 2.1. Types of Works, 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; 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 instructions, 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 sound track, 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 independently.

37. Many copyright laws protect also works of "applied art"(artistic jewelry, lamps, wallpaper, furniture, etc.). In the legislation of some countries phonograph records, tapes and broadcasts are also considered as works.[26]

2.2. Exclusive Rights

38. The rights bestowed by law on the owner of copyright in a protected work are exclusive rights to authorize others to use the protected works. Such rights are often known as economic rights, as they allow their owner to derive financial reward from the use of the works by others.[27] As economic rights they can be transferred and assigned (sold), which is linked to their function as property rights as well. The economic functions of copyright law will be more extensively considered in the following Chapter.

39. A list of the main exclusive economic rights accorded to authors (and often transferred to others, to whom the authors have sold their rights) in the international treaties mentioned earlier is reproduced here below:[28]

40. *Right of reproduction* – the right of the owner of copyright to prevent others from making copies of his works, which is the most basic right under copyright. It covers all categories of works. This right is applied regardless of the form of the copy (printed copies, 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 legislation to another. In some cases, it comprises the right of distribution, rental or adaptation, in others, these are regarded as completely separate rights.

41. *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 both from the owner of the copyright in the original work and of the owner of copyright in the translation or adaptation.

42. *Right of adaptation, arrangement and other alteration* – "adaptation" is generally understood as 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, e.g., by adapting 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, which are embodied in digital format. With digital technology, 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, on the one hand, and the rights of users to make changes which seem to be part of a normal use of works in digital format, on the other hand.

43. *Right of public performance* – covers the performance of works at a place, where the public can be present, or at a place, where a substantial number of persons, outside the normal circle of the family 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. It includes also 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.

44. *Right of broadcasting* – covers the transmission by wireless means for public reception of sounds or of 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 is distributed, by wireless means, which can be received by persons who possess the equipment necessary to receive and, if necessary, decode the signal. In some national legislation, cablecasting, that is, cable transmission which is not simultaneous, unchanged retransmission of broadcast, is assimilated to broadcasting.

45. *Right of communication to the public* – embraces a wide scope of activities. Traditionally, it has referred to any operation involved in rendering a work perceptible by the public being at a place other than that, from where the communication is made, in particular through cable transmission. Today, this right also embraces the notion of making available on-line on-demand, that is to say, in such a way that members of the public may access those works from a place and at a time individually chosen by them. Its relevance, therefore, is evident for transmissions in digital networks. The right of communication sometimes at national level is defined very broadly and may cover also public performance and broadcasting.

46. *Right of distribution* – covers the distribution of copies of protected works. This right is granted in order 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 the work. It is usually subject to exhaustion upon 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 giving it away or even by reselling it. In this respect, a very important aspect of this right refers to the question of 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 on the level of the international treaties.

47. *Right of rental* – covers the authorization of commercial rental of copies. It is normally restricted to certain categories of works such as musical works, included in phonograms, audiovisual works and computer programs.[29] This right is justified because the rental of copies could damage the author's potential market. The rental, at a certain scale, can mean a lost sale or remuneration. Also, one single rented copy can be reproduced uncontrollably many times. The latter is particularly important with regard to digital technology, which provide easy and inexpensive ways to reproduce and distribute an unlimited number of copies without loss of quality.[30]

2.3. Limitations on Rights

48. There are some conditions and limitations on the rights described above. The first one 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. In some (but not all) countries, moreover, the texts of laws, court and administrative decisions are excluded from copyright protection.

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

50. Examples of free uses include the making of quotations 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; use of works by way of illustration for teaching purposes; and use of works for the purpose of news reporting. As noted above, numerous laws contain provisions allowing reproduction of a work exclusively for the personal, private and non-commercial use of human individuals; the ease and quality of individual copying made possible by recent technology has led some countries to narrow the scope of such provisions, including through systems which allow certain copying but incorporate a mechanism for payment to owners of rights for the prejudice to their economic interests resulting from the copying.

51. 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 use of works without the authorization of the owner of 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 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.

2.4. Related Rights

52. The related rights[31] provide protection to those who assist intellectual creators communicate and disseminate their works to the public. These rights are similar to copyright, but often narrower in scope. The main related rights granted are as follows:

53. The rights 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 making available 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.

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

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

2.5. Legal Framework and Copyright Markets

56. The various rights described so far provide the legal framework in which the economic transactions take place. In this way copyright performs economic functions (discussed in detail in the following Chapter). Usually an economic transaction involves many rights, with values determined by different market factors. The rights may operate differently in the different markets. The following indicative table may help in positioning the rights and their scope with respect to the markets of products in which they operate.

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. It 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, audiovisual works, computer programs. It might also cover the importation on copies.
Communication to the public	Relaying of works by any distant communication or interactive communication means. It might embrace 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 the making available of works in digital networks.
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 public reception. It embraces also satellite transmissions intended for public reception.

57. It is however very important to remember that in most economic transactions involving cultural creations, protected by copyright, that we refer to in this Guide, 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).

Chapter 3: The Economic Fundamentals of Copyright

58. In the process of exploitation of works protected by copyright, copyright reveals its economic functions and produces multiple effects on the economy. The aim of this Chapter is to introduce some basic notions of the economics of copyright, which are relevant for any study. It should be clarified from the outset that it is impossible to conduct a study which purports to examine an economy where there is no copyright protection and then measure the size of the economy after copyright protection is introduced. In this Guide we speak only about studies that measure in economic terms the size of copyright-based industries and activities. In order to come to quantifiable characteristics of activities protected by copyright one has to assume also that protection is there and then study its economic consequence. This is an important point of departure, that has been followed in past surveys. At the same time it has to be mentioned that a lot of efforts have to be made in order to avoid exaggerating the effect of copyright by double counting.

59. It could also be noted here that while there is significant amount of literature on the economic effects of patents on economic growth, similar work has only relatively recently started on copyright. Even if measuring the size of the copyright-based industries is more of a task for applied economists, they all admit the need for a clear conceptual and methodological framework, including a sound grasp of legal and economic notions, for future studies.

60. The Chapter is intended to give some idea of the considerable task that faces anybody embarking on a study of the economic contribution of the copyright-based industries. The complex activities based on the exploitation of copyright deserve adequate reflections in the studies to be undertaken. Estimating the value added by the industries, in which copyright plays an important role, necessitates dealing with conceptual issues as well as with practical ones, which will be considered in the following Chapters.

3.1. Streamlining Terminology

61. Throughout *the Guide* and in the existing research on the matter you would find a number of overlapping terminology – references to copyright, cultural products, works, copyright-based industries, creative industries, cultural industries, cultural economics. What is the relationship between those?

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

63. "Copyright-based," "creative" and "cultural industries" are applied often in the text as synonyms to refer to those activities or industries where copyright plays an identifiable role. However, it has to be recognized that some differences between them exist. "Cultural industries" refers to those industries which produce products that have culturally significant content that is reproduced on an industrial scale. It is often used in relation to mass media production. "Creative industries" has a wider meaning and includes, besides the cultural industries, all cultural or artistic production, whether live or produced as an individual unit and is traditionally used in relation to live performances, cultural heritage and similar "high-art" activities. The borderline between these two is often very fine.[32]

64. Cultural economics studies the interaction of cultural and economic value and its effect on the creative industries. In this respect it studies the significance of cultural goods and services to the development of society, their qualities and other characteristics, including government policies in this regard; the cost benefit expression of the underlying opposing interests in copyright; the use of cultural goods by consumers, consumer habits, etc.

65. Speaking of the economic contribution of the copyright-based industries one has to be aware of the limitations of this term, which gives, perhaps, a more general qualification to the subject referring also to its overall significance. This has probably justified the use of this particular terminology in a number of the studies, undertaken so far (see Table 1.1. in Chapter 1). However, estimating the economic "impact" of copyright would mean how much bigger the industries would be with copyright and that is very difficult to measure. Measuring their size, as opposed to the incremental size, does not measure impact and therefore this term could be somewhat misleading and is deliberately avoided.

3.2. Main Economic Characteristics of Copyright

66. In addressing the issue of the economic fundamentals of copyright one has 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 of the fact that this is a private property right.[33] For the purposes of the study, copyright is analyzed as the property right in a literary or artistic creation or work. Property rights are defined as "the ability of individuals to own, buy, sell and use their property in a market economy."[34] In the case of copyright this right is particularly important in the sense of 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 enables it to be traded and to participate fully in economic life. As with other property rights, social acceptance of private property is a prerequisite for the existence and enforcement of copyright and activities based on it.

68. As copyright is a category that embraces different sets of private property rights, it can be subdivided and made the object of separate market transactions. There would be thus a different degree of access to the underlying copyright in each transaction.[35]

Copyright is different from means of delivery

69. One must carefully distinguish 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 is a means of delivery. The principal difference between a protected work and a means of delivery is that the first has characteristics of a public good, while the means of delivery is typically a private good.[36] Copyright itself only refers to the intellectual property aspect, and not the means of delivery. However, the size of the copyright-based industries and the cultural activities in general are closely linked with the means of delivery. It should be underlined that the means of delivery performs the function of an intermediary between the underlying copyright and the market and therefore activities related to the production of and trade with means of delivery are closely related to the object of the survey. Fortunately, the study is facilitated by the fact that the markets of means of delivery are well defined.

70. Two additional conceptual differences between goods in the economic sense (means of delivery) and works in the copyright sense could be mentioned here. The first is that while copyright has a statutory duration, the good in which the protected work reside are mostly beyond their product life a long time before copyright has expired. Thus, it has been shown that only 5 percent of books were still in print when their copyright expired.[37] The second point is that a means of delivery often embodies several works. Take the example of a CD. The composer(s), lyricist(s), the performers and the record company all have created works that carry different rights and these rights have different values in different markets. This naturally creates difficulties in estimating the exact value added of each of the rights involved. The functional relationship between the copyright work (the content) and the means of delivery is one of interdependence, since they enhance each other's value, they are mutually complementary[38] and thus must be analyzed together.

Copyright has some "public good" aspects

71. Cultural creations have some characteristics of public goods – they convey benefits to the community, which are indivisibly spread.[39] The benefits are cultural, social and economic, they create a sense of identity and determine social values. Works can be used at the same time by many users and this process does not affect their consumption by each individual separately as no current user possesses less when new users start consuming the work. In addition to this it is impossible to exclude free riders, except at a cost. This aspect is in a way manifested in the concept of exceptions and limitations of copyright, which recognizes the need for a certain portion of copyright to be available at no cost at all given its public or social importance.

3.3. Economic Functions and Consequences of Copyright Law

72. Copyright law is designed to establish the right balance between the 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 its 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 as it enables trade with the access to the underlying intellectual property. Without copyright it would have been less profitable to trade in cultural creations since they would not have acquired the characteristics of economic goods.[40]

74. Secondly, copyright also tries to balance productive efficiency with distributive efficiency.[41] In order to have economic value cultural products have to be produced and distributed in a manner that can make their continued production and distribution economically sustainable and hence provide income for their creator.

75. Consequently copyright helps creators to appropriate 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 they are entitled to under the law. The economic value of a cultural good[42] is always closely linked with the underlying value of the intellectual property in it. The extent to which these functions are successfully achieved would determine the efficiency of copyright law.

76. Copyright law has also a number of important consequences of economic nature: Copyright protection increases the ability of the copyright holder (the supplier) to maximize his market position in at least two ways. Firstly, it allows him to set the market price at a "monopoly" rather than at a competitive level (though we refer here to a different type of monopoly),[43] 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 that is associated with the public good aspect of copyright[44]. This is achieved through the concept of exceptions and limitations in copyright law. An inevitable downside, linked to the inability to fully control the implementation of copyright, is the existence of black and grey market of copyright products.

78. In broader terms copyright law enhances welfare, growth and development as it encourages creativity, social, and technological progress. In so far as copyright law enables trade to take place that otherwise could not do so, it improves also national and international welfare.

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

80. A number of conditions need to be met in order for copyright to perform its proper functions. Among those particular attention should be paid to appropriate monitoring and controlling misuse by consumers as well as the existence of appropriate valuation of copyright, which has to balance the true cost of production and efficient protection.

81. In summary, copyright law is supposed to allow for the optimal amount of cultural assets to be created, and to allow access to the underlying intellectual property to be distributed efficiently via market transactions 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 another employment. Creation implies an initial fixed cost to the creator (opportunity costs, efforts, etc.) and production implies a variable cost whenever the underlying intellectual property is attached to the chosen delivery good and a unit of the delivery good is produced and marketed. If the intellectual property is not protected it will be easily reproduced and some other delivery media will compete with the original on the market. This will undermine the profits and could imply insufficient compensation for the creator. Under a system of legal protection the marginal cost of reproduction will be increased and the market price will not fall so far as when originals and copies compete and creators can thus enjoy compensation.[45]

3.4. Copyright in the Context of the National Economy

(a) Multiple effects on the economy

82. The creative process itself represents an economic activity since some "value added"[46] is created in it. However, the economic effect is not only linked to the production of the work but also to its distribution and consumption, i.e., its participation in the market

process. Effects are produced on the overall economy at all different stages – creation, production, distribution and consumption. It should be noted that these effects vastly vary, depending on the different categories of work, thus for example in respect of a book and a song – different materials are used, different formats are applied, different devices are needed to use the work, etc. Different works have different effect and in this Guide we focus only on the effect which has 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 – those of the creators, the rightholders, the distributors, users, equipment manufacturers, advertisers, etc. In view of maximizing the comprehensiveness of the study one should 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 and their chain, is reproduced in Figure 1 at the end of the Chapter.

(b) Economic organization and the role of the government

84. Copyright enables right holders to control the uses of their works thus allowing to derive economic benefits from the dissemination of the works. However, merely possessing rights does not ensure that they have economic value; that depends upon 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 which are provided by the cultural or creative industries and creators must negotiate certain terms with these industries. The economic organization of the cultural industries (including also 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 have also a role to play – on the one hand, they regulate the industry through application of competition law, while on the other hand, in a few instances they try attempt 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 and may even be controlled or supervised by them. Copyright collecting societies have three major functions – they license the works in which they received the right from the right holder for specific uses, they monitor use and collect revenues associated with such uses, and they distribute revenue as royalties to their creator-members. The relationship between creators and copyright societies is based on the existence of high transaction costs in the management of copyright, the comparative advantages from specialisation and the benefits from collective action.[47]

3.5. Main Characteristics of the Cultural Market

85. Cultural markets are highly diversified and that leads to substantial differences of the various industries or copyright activity under review. The different industries have different media for distribution, rely on different technologies, and require different materials and in general different levels of investment. They often target different audiences and base their activity on different rights or set of rights. As earlier pointed out, in real life one transaction involves many rights. An important aspect of the cultural market is the financing available. Clearly, the media industries, which reach a broader audience, demand bigger investments

than the performing arts. This influences also the dynamics in the various copyright-based industries. Another issue of considerable importance when describing the various copyright-based industries is the financial aspect. Copyright represents a different cost for the companies across sectors. According to some experts in the book industry the acquisition of the copyrighted work is about 5% of the total cost to the industry. In the film industry in the United States of America it is about 50% of the cost and in the rest of the world it represents about 75% to 90% of the costs.[48] There are big differences in terms of the portion of the costs of the actual copyright material with regard to the economics of an entire industry and adding this consideration in the study is important in terms of understanding where it fits into the overall importance of these industries and the activities that take place there. A survey of the economic contribution of the copyright-based industries can benefit from a short description of the specifics and main trends in the industry or activity under review. However a detailed vertical market analysis of an industry is not the primary objective of the survey.

(a) The demand side

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

87. In terms of performing arts studies 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, with regard to individual titles demand becomes highly unpredictable.[49] The quality of the product and information about it are among the main sources of consumer uncertainty. There is a marked tendency for demand to focus on "superstars," which has been explained as a response to consumers economizing on search and information costs.

88. One could also distinguish direct demand, i.e., 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 its possible modification.[50] This is closely linked with the existence of two types of cultural markets operating side by side: the primary and the secondary market. The primary market is sales of what are apparently consumer goods, e.g., CDs; the secondary market is for the use of these goods in other settings – public performance of sound recordings and films, photocopying of printed material and images and such like. While primary sales of some items are falling, revenues are increasing for secondary use.[51]

(b) The supply side

89. Features common to all information industries are high set-up costs for content and low or negligible marginal costs of delivery.[52] These are the classic economic characteristics of economies of scope, enabling domination and concentration in some markets by a limited number of companies.[53] At the same time, one could also note the existing tolerance of small independent companies in these industries. They are necessary to the large companies as a source of artistic R&D (in the music business this is known as A&R – Artists and Repertoire) because large organizations have more difficulties in spotting talents at an early stage.

90. Another feature of the creative industries is the incessant search for novelty, which makes the creative industries risky. However, there is an inherent asymmetry between creators and firms in this respect. Firms can pool risk by holding a portfolio of copyright assets of different ages and risk and they have access to capital markets; individual creators can rarely do either.

91. A third aspect of the creative industries is that risk bearing is shared between individual creators and the firms; the creator typically bears the fixed costs of creating the primary content (writing the book or music, acquiring the necessary human capital etc.). But though 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, characterized by short-term employment and oversupply.

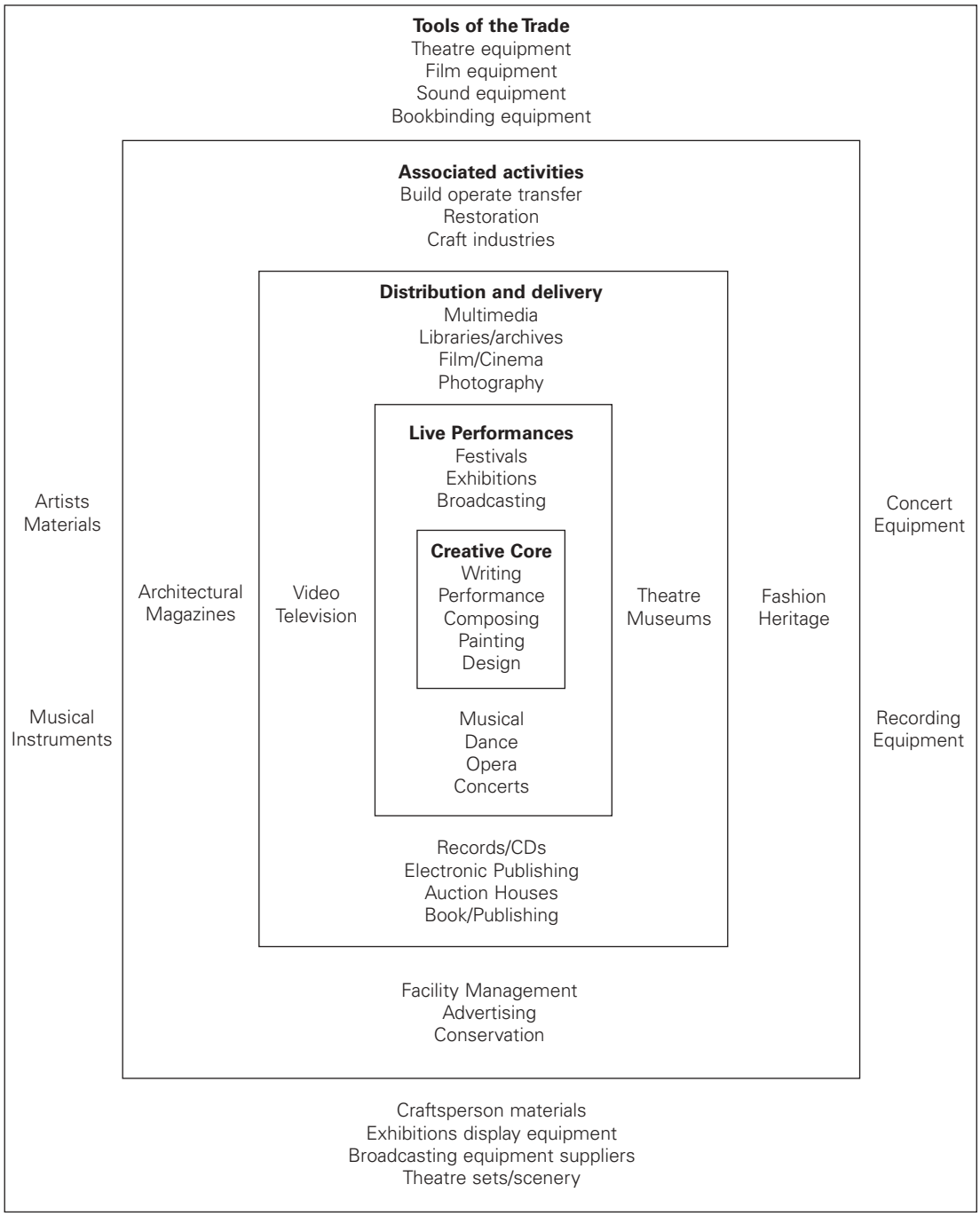
(c) The labor markets

92. The cultural industries depend strongly on creative inputs. Creativity plays the equivalent role in the creative industries to that of innovation in other sectors of the economy. Just as firms in manufacturing have outlays on research and development (R&D), so firms in the creative industries search for new ideas and talented workers to supply them. And, as with innovation, we may distinguish product and process innovation. New products are very important in the cultural industries, with a stream of novelty being demanded and supplied. 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 – 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 the employment in the cultural sector of some types of artists and increasing it for others. They also have implications for the location of the industries and so on the location of employment.

93. Existing research allows some generalizations about artists' labor market behavior and experience.[54] The distribution of artists' incomes is highly skewed with a few superstars having very high incomes from fees, sales and royalties. Research in a number of countries has shown that the "typical" (that is, non-star) artist is a multiple jobholder, working longer than average hours in arts and non-arts, work 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.

94. 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 1 Creative Industries[55]



Chapter 4: The Copyright-based Industries

4.1. An Overview

95. Defining the copyright-based industries is a primary task of each survey and is closely linked to practical decisions on the focus of the survey. This task has two aspects – deciding on which are the industries to be studied, and arranging them into appropriate categories according to the extent to which their activities are based on copyright.

96. The various existing studies offer different categorizations – core, partial, distribution and copyright-related industries (United States of America, Japan); core, partial and distribution copyright industries (Australia); core, copyright dependent and other copyright-related industries (Finland, Norway); direct, indirect or distribution and partial activities (Netherlands); primary, secondary and related industries (Germany); major copyright industries and industries with some dependence on copyright (United Kingdom). The approach has been to separate the industries that are fully or predominantly based on copyright from other industries which depend to a less extent on copyright protected materials. The aim of this Chapter is to provide some criteria for the categorizations and to propose a list of selected industries to be studied.

97. An important methodological remark is that "industries" in these studies mean clusters of activities which can be identified and are statistically measurable, as well as activities which have a certain scale and structure. Combining "activities" with "industries" is an approach which may differ in national accounting systems. While this may present a practical problem, combining various types of statistics can help overcoming existing difficulties in this respect.

98. The Working Group of Experts, which met in July 2002 in Helsinki, agreed on a possible categorization of the copyright-based industries into four main groups, which are reviewed in this Chapter. Those are the core copyright industries, the interdependent copyright industries, the partial copyright industries and the non-dedicated support industries.

99. This approach means that already existing industries are being grouped into new categories for the purposes of the survey. This is not new – the tourist industry has adopted, for example, a similar approach which has gradually led to the existence and acceptance of a whole industrial sector.

100. There are two ways of approaching the surveying of the copyright-based industries – either by examining the creation, manufacturing and distribution of works or copyrighted products, or by describing those in terms of core, interdependent, partial and non-dedicated support industries. The second approach is hereby recommended mostly in order to overcome difficulties of disaggregating activities.

101. The inclusion of some of the industries on the list with proposed categories requires justification. The general approach, recommended in this Chapter is a conservative and a cautious one and is not in favor of further enlarging the detailed lists of industries within the four categories that will be examined in the Chapter. In the process of the survey the copyrightable activity becomes the subject of industrial activity. In that case only the commercial aspect is measured which is related to the market function. That would naturally exclude all private use activities.

4.2. The Core Copyright Industries

4.2.1. Functional Distinctions

102. 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[56] 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 that both produce and distribute copyright materials. Analysts generally have selected the so-called "core" copyright industries from these categories.

103. For certain industries, the distinction between the production and distribution of copyright materials may not be meaningful, since it would involve 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 that "creates" the actual news, advertising people who sell and reprint advertising, production employees who physically print the newspaper and distribution people 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 firm by function and allocating the firm'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 and such an approach is thus not recommended.

104. The production and distribution functions are closely linked. Indeed, for many copyright-based 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 both 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 that the film will achieve in different media (i.e., theatrical, home video, cable television, broadcast television) and in different geographic markets around the world. For these reasons, the concerns and constraints of the distribution function in movie making may ultimately serve to influence and even limit the production quantity and quality of the motion pictures. Production and distribution may thus be truly interdependent. Splitting of corporate functions can thus not really provide credible results because the organization of the business was aimed at establishing optimal efficiency of these core activities and the business would not be the same if it had been organized in a different manner.

105. 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 and seasons. That television studio or network may or may not have invested in original program production. Thus, at any given moment, the station or network may be either a producer and distributor of television programs or simply a distributor. Nevertheless in any of those instances that 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 distinctions between producer and distributor of copyright protected works.

106. In brief, the functional distinction between production and distribution is not recommended hereby in view of the fact that in many industries the corporate organization is such that there is interdependency of the functions for economic efficiency reasons and both functions are performed simultaneously or inseparably.

4.2.2. Statistical Distinctions

107. The statistical distinctions have two aspects – how to classify these industries and secondly, where to find data on them.

108. Statistical distinctions often tend to follow the functional distinctions. Governments' 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 industrial organizations' structure. At the corporate level, statistics are mostly compiled without distinction between production and distribution. Consequently the consolidated account statements reflect this and it leaves very 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.

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

110. In most of the existing studies, the core copyright industries studied are identified in a similar manner since they all correspond to the criteria of being entirely based on material protected by copyright.

111. On the basis of the comparison between the various studies and approaches, the following nine groups of core copyright industries, according to product or service, are recommended to be included 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 and databases;

(g) visual and graphic arts;

(h) advertising services; and

(i) copyright collective management societies.

112. Significantly, these industries do not include a sizeable number of other industries whose output depends only in part on copyright protection. They also exclude estimates of the portion of a nation's infrastructure, including its retail and transportation industries, whose output is based, only in part, on the distribution of copyright protected goods. Finally, the core industries have typically excluded certain publications and research materials that are generated only at educational institutions.[57]

113. As to the second aspect – where to find the statistics, it can be pointed out here that the national industrial classification systems and the systems of national accounts are perhaps the best source that can be used. The issue of appropriate statistics will be further explored in Chapter 7 of the Guide. The organization of the national statistics has had a major impact on the existing studies.

114. Statistical systems do not remain static, they change and sometimes they change in very dramatic ways. The reclassification of industries is a fact that needs to be borne in mind because it may affect the studies. Reclassification may create a problem in matching data in consecutive studies, etc. An example is mentioned in the US report on the Copyright Industries in the US Economy in 2002,[58] which points to the need of gradual adoption of the North American Industry Classification System (NAICS) across its entire statistical base. The NAICS system groups industries on the basis of similar production process and introduced changes in such sectors as manufacturing, retail and wholesale, trade, information and professional, scientific and technical services.[59] The newly-introduced information sector is in turn comprised of four sub-sectors: (1) publishing industries, (2) motion picture and sound recording industries, (3) broadcasting and telecommunications and (4) information and data processes services. So, those are four sub-sectors now identified in the NAICS and then those industries in turn are subdivided into a further level of disaggregation. However, the NAICS information sector does not correspond perfectly to the core copyright industries. For example, it includes certain industries such as both wire and wireless telecommunications that have never been considered as part of the core copyright industries and consequently the value added calculations will be affected.

4.2.3. Definition and Breakdown of the Core Copyright Industries

115. The core copyright industries are industries that are wholly engaged in creation, production and manufacturing, performance, broadcast, communication and exhibition, or distribution and sales of works and other protected subject matter.

116. Four points could be mentioned in relation to this definition:

(1) this definition reflects the functional complexity – (a) creation, production and manufacturing (i.e., producing); (b) performance, broadcast, communication and exhibition (intangible forms of disseminating); and (c) distribution, sales and services (distribution or tangible dissemination);

(2) all three functions in the proceeding point cover individuals and firms whose activities are entirely related to works and other subject matter for copyright protection;

(3) 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 that category 100% of the value added should be assigned as copyright contribution to the national economy; and

(4) only that share of the distribution industry which is entirely dedicated to distributing copyrightable materials is included in the core copyright industries.

117. A breakdown of the various activities that can be included under the nine subgroups mentioned under 4.2.2. follows here. On the basis of this list and the national classification system, appropriate adjustments could be made when undertaking a national survey, i.e., certain activities may not be present in a country's classification or may have different names, national legislation may not provide protection to certain categories of activities which should consequently be excluded. It has been 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;[60]
- newspapers;
- news and feature agencies;
- magazines/periodicals;
- book publishing,
- cards[61] 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 (book stores, news stands[62]); and
- libraries.[63]

(b) 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; 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;[64]
- video rentals and sales[65] including video on demand; and
- allied services.[66]

(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.[67]

(e) Photography[68]

- studios and commercial photography; and
- photo agencies and libraries (photo-finishing labs should not be included).

(f) Software and databases

- programming, development and design;
- manufacturing, wholesale and retail prepackaged software (business programs, video games, educational programs etc.); and
- database processing and publishing.[69]

(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).[70]

118. The above categories are those that have to be accounted for in collecting appropriate statistics. As stated earlier, they may be organized in a different manner in national statistics.

4.2.4. Evolution of the Core Copyright Industries

119. The development of the Internet may affect the core copyright industries in many significant ways. Dial-up and increasingly broadband data links are being used to distribute text information, music and even video products directly to and from consumers. The convergence of services requires more careful consideration of the products that 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. The nation's investment in these emerging forms of digital access will be an issue for consideration in future studies.

120. Another aspect of the Internet should also be considered. The nations' total creative output probably will have to reflect also the extent to which that creative output includes web sites and other material that is only produced and distributed in digital form on the Internet. The creative side of Internet products and services will probably qualify for quantification as part of the core copyright industries in the future.

4.3. Interdependent Copyright Industries

4.3.1. General Considerations

121 It is impossible to define the industries that do not form part of the core copyright without first defining accurately what are the core industries. The definition and identification of "non-core" industries has been characterized by blur borders and frequent changes across borders. The term "interdependent copyright industries" is recommended here instead of "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 much better idea of the functional relationship as opposed to the static term of "non-core."

122. Another precondition for studying the interdependent copyright industries is the existence of a clearly defined industrial code. Only when that exists and the production unit is classified can the methodology of national accounting be used to measure the economic contribution of a given industry.

123. Generally, the interdependent copyright industries can be identified and studied through a careful tracing of the backward linkages (the relation between a copyright product and the business services, transportation, purchase of production factors, investment goods, machinery), as well as the forward linkages (wholesalers and other consumer entities). The backward linkages are of particular importance in estimating the indirect economic contribution of a product to the economy. Nowadays the sectors in the backward linkages are increasing tremendously and are affecting the classical sectors as traditional functions are subcontracted or entirely performed by companies in other sectors. The result is that industries appear smaller because administrative, accounting and management functions are moved to business services. This kind of approach is closer to the value chain analysis but it is necessary to understand the specifics of the interdependent (and even more so the partial and non-dedicated copyright industries) and justify the figures obtained.

124. Often, the conceptual, analytical and statistical framework determined in any specific national study is not changed dramatically in subsequent studies. However, new developments, especially in technology (computer programming, multimedia and Internet did not apparently appear in the 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, one could place them under different categories. Concepts and analytical approaches must therefore be kept flexible.

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

126. In the existing studies so far, various approaches have been adopted to identify what industries are "non-core." There is no close correspondence between the different national studies in respect of the interdependent copyright industries. When undertaking the analysis it has to be borne in mind that statistically, the interdependent copyright industries add a relatively little portion – in average between 1% to 1.5% GDP over and above what the core industries contribute.

4.3.2. Definition of Interdependent Copyright Industries

127. Interdependent copyright industries are industries that are engaged in production, manufacture and sale of equipment whose function is wholly or primarily to facilitate the creation, production or use of works and other protected subject matter.

128. The interdependent industries can be further divided on the basis of their complementarity with the core copyright industries into – core interdependent and partial interdependent industries.

129. The first group - core interdependent copyright industries, includes 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;
- computers and equipment; and
- musical instruments.

130. The products of this group of industries are jointly consumed with the products of the core copyright industries, e.g., there is no television programming unless there is a television. The interdependent copyright industries support the use of the copyright content in crucial ways. They are dependent on the availability of copyright works. In some studies they have been referred to as "copyright-related," "copyright hardware," etc.

131. The second group of interdependent copyright industries - partial interdependent copyright industries covers manufacture, wholesale and retail (sales and rental) of:

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

132. This group contains some part of copyright material but to a lesser extent than the core interdependent group. These industries do not exist primarily to perform functions related to copyright works but significantly facilitate their use, predominantly through facilitation equipment.[71] They are linked to multi-purpose technological devices that have other uses outside the use of copyright works and other protected subject matter. For the most part they are consumer durables. The value assigned to them is based on the judgement of the research team following the analysis made.

4.4. Partial Copyright Industries

133. The partial copyright industries are industries in which a portion of the activities is related to works and other protected subject matter and may involve creation, production and manufacturing, performance, broadcast, communication and exhibition or distribution and sales.

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

- apparel, textiles and footwear;[72]
- jewelry and coins;[73]
- other crafts;
- furniture;[74]
- household goods, china and glass;
- wall coverings and carpets;
- toys and games;
- architecture,[75] engineering,[76] surveying;
- interior design; and
- museums.

135. This list could be enlarged. However it is recommended not to further extend this list as this is not likely to indicate major contributions of other activities. If the lists are extended, it is advisable to do it in a specific survey outside the main research. it is advisable to do it outside the main survey.

136. Some partial copyright industries have significant service components, which are not necessarily about production of works protected by copyright and have to be separated. For architecture, for example, various studies take between 65% to 75% of the architectural industry as having a copyright component and 25% to 35% as being related services. A careful and detailed analysis of each the particular industry is needed, understanding of its structure and process in a given country and only then a decision can be made on the percentage to be regarded as copyright-based. This judgement is very important because sometimes a firm is classified as belonging to a certain industry if 65% of its value added is considered as belonging to this industry.

137. A particular 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, resulting from creative efforts irrespective of the form, method or material used. In that respect, it is a matter for national legislation to determine the extent of the application of their laws to works of applied art and 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.

138. In light of the above, the legal delimitation would have to be made already 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 not protected at all. It may also appear under the heading crafts in the statistics. The situation is different from country to country. Germany, for instance, admits the protection of design with quality features by specific law. Those must be registered in order to obtain the protection, and copyright only applies when an extremely important aesthetic content exists. In contrast, the Italian legal system does not permit a cumulative protection under both designs 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 designs are not superposed, but added. It implies that the owner of a registered design has the possibility to get also copyright protection.[77] In some countries the issue whether artistic design is copyrighted is considered by special bodies.

4.5. Non-Dedicated Support Industries

139. The non-dedicated support industries are industries in which a portion of the activities is related to facilitating broadcast, communication, distribution or sales of works and other protected subject matter, and whose activities have not been included in the core copyright industries

140. These industries include:

- general wholesale and retailing;
- general transportation; and
- telephony and Internet.[78]

141. These industries stem from the backward linkages and generally refer to business services and delivery modes. They measure spillover effects but are quite far from the core copyright industries. The non-dedicated support industries group points to functions shared with other industries and that is why they can be taken in account only to a certain extent in the survey. Here again a qualified judgement must be applied when measuring their effect on the national economy. When analyzing the distribution aspect of this group of industries one would have to use estimates of the specific function which is performed by the non-dedicated support industries.

142. A summary of the various categories of copyright-based industries and their sub-categories is reproduced in Annex I of *the Guide*. A further step in the analysis is to link these industries with the SIC codes which will be done in the Chapter 6.

Chapter 5: Framework Of The Study

143. In order to quantify the contribution of copyright-based industries to the economy the studies framework should include measurements of the percentage of the Gross Domestic Product (GDP) attributable to them, the employment in the copyright-based industries and their share in foreign trade. The value added approach is recommended here as most appropriate for measuring the relative size of these industries in the GDP.

5.1. Guiding Principles

144. It is important to be clear as to what measurements should be used when determining the economic contribution of the copyright-based industries. These measurements should be representative in nature, justifiable and obtainable without major difficulties. The following characteristics of the measurements used could be mentioned:

- they should be statistical in character and be produced on a regular basis (i.e., not only as one-time 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 activities, giving a possibility for cross-sectoral analysis; and
- data should be internally consistent and presented within macroeconomic frameworks recognized at the international level.[79]

5.2. What to Measure?

145. The existing studies show a great deal of consistency among them in terms of what need to be studied. They focus consistently on three main indicators:

(1) size of the copyright-based industries as a percentage of GDP;

(2) employment; and

(3) foreign trade (i.e., share of imports and exports).

146. These three indicators are mutually complementary and provide a comprehensive horizontal picture of the copyright-based industries in a given country.

147. It is possible to make use of other indicators to provide an extended analysis of the overall impact of copyright-based industries on the economy, e.g., taxes paid, revenues, salaries. The danger is that double-counting, resulting from intermediary providers, would be hard to avoid.[80]

148. Consequently, it is recommended that studies should seek to measure: the percentage of GDP attributable to the copyright-based industries; employment in those industries; the international trade position (i.e., share in imports and exports). Naturally, all measures can give a dynamic perspective only in the context of consecutive studies over

time. If, for some reason, other indicators are studied, those should be highlighted as this will affect the comparability.

5.3. Size of the Copyright-Based Industries as a Percentage of GDP

149. Existing research has shown that the size of the copyright-based industries in terms of percentage of GDP, to the extent that it has been possible to measure it, has surpassed many expectations and has been growing at a faster pace than the rest of the economy:

- the report on the copyright-based industries in the US economy (the 2002 report) points that in the last 24 years (1977-2001) the core copyright industries share of GDP grew more than twice as fast as the remainder of the economy (7% versus 3%);[81]

- the 2001 Australian study shows that over the period 1996-1997 to 1999-2000 the copyright-based industries grew at an average annual growth rate of 5.7%, exceeding the average annual growth rate of the total economy over the same period, which was 4.85% per year;[82]

- in the period 1994-1998 the copyright sector in the Netherlands grew one and a half times faster than the Dutch economy as a whole – 5.6% compared to 3.2%;[83] and

- during the period 1988-1997 the average annual growth in Finland was 4.05% while at the same time the growth of the value added in the core copyright-based industries was 8.3%.[84]

150. These results, independent of absolute figures and methodological differences, confirm the upward trend of the increasing percentage of GDP attributable to the copyright-based industries.

151. In order to establish the size of an industry in terms of share of GDP one can use several alternative approaches. The GDP is a measure of all final output that is produced by all productive activity in the economy.[85]

5.3.1. Alternative Measures of Relative Size

152. The relative size of the copyright-based industries can be measured in three ways as a percentage of GDP, namely through:

(1) output or production – where the GDP is viewed as the difference between output and intermediate consumption, i.e., the sum of the value added of all industries, firms or establishments, and is compared to the value added of the copyright-based industries. This is the standard way employed in the past surveys on the copyright-based industries;

(2) expenditure – whereby GDP is viewed as the sum of all expenditure categories – personal consumption,[86] gross private domestic investment,[87] government purchases,[88] and net exports[89] – and is compared to the sum of all copyright-related expenditure categories; and

(3) income – whereby GDP is the sum total of payments to factors of production organized by companies (primarily labor and capital),[90] and would be compared to the

sum of compensation paid to copyright-related labor (i.e., compensation to employees through wages and salaries, bonuses and other benefits) plus copyright-related profits that accrue to firms.[91]

153. In principle, the three methods would yield the same estimates of GDP, and the same relative sizes of the copyright-based industries. However, as different data sources are used, differences between them would inevitably arise.

154. In practice, measuring the size of the copyright-based industries through their contribution to value added has been preferred for a number of reasons:

- it is an industry-centered approach which accords with the desire to identify the contribution of the copyright-based industries;
- it reduces the chances of double counting;[92] and
- value added input-output tables (and the surveys underlying them) are readily available for many countries.[93]

155. For some countries, however, it may be easier to adopt alternative approaches. In this context it could be mentioned that it is generally considered easier to obtain reliable estimates for expenditures than for income components as they are measured more directly.

5.3.2. The Value Added Approach

5.3.2.1. Some Definitional Issues

156. As noted earlier, 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:

- the valuation principles to be employed are that: use should be valued at purchasers' prices; and production should be valued at basic prices. This method ensures that the derivation of value added (output less intermediate consumption) is attributed to the appropriate industry;
- 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; and 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, 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;
- the value added approach will not capture:
  - illegal activities, e.g., piracy, even if they produce goods and services sold on the market and generate factor incomes;

– the underground economy[94] (including in-house production and internal use in enterprises or the administration);[95] or

– external, i.e., spillover effects[96] (see also Chapter 7.2.).

157. All of these omissions may imply significant figures in different countries and are undesirable when the purpose is to measure the overall flows of goods and services.

158. The value added approach cannot take full account of the convergence between industry sectors, changes in primary activities of economic establishments as well as shifts in the organizational structure (e.g., mergers and acquisitions, etc.) which may lead to reclassification of firms and activities from one sector to another (e.g., from software to hardware) and can alter industry totals for important economic variables.[97] Those limitations have to be borne in mind when using this approach.[98]

5.3.2.2. Data Availability

159. Data used to estimate the copyright-based industries value added tend to originate from two main sources: input-output tables or industry specific value added estimates. These are discussed in turn below:

(a) Input-output tables.[99]

For each industry these tables specify both the inputs used and the outputs produced. This information provides a robust picture of the linkages and mechanics of the economy as a whole, and provide a detailed collection of industry-specific statistics. However, there are two possible limitations with input-output tables:

(1) the timeliness and complexity of generating the information which is required by the input-output model.[100] It often implies surveying a wide selection of industries which is very costly to produce and time-consuming to undertake. 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 are invariably between two and seven years old. 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;[101] and

(2) in many cases the formal input-output tables may not be disaggregated to the desired degree of detail to produce credible estimates. In this case, additional supporting analysis may be needed to make an informed estimate of the component of the sectors which can be said to represent copyright-based industries.

(b) Industry specific estimates of value added

These indicators could be used instead or along with the economy-wide input-output tables.[102] However, it has to be borne in mind that some of the industry specific value added estimates may have been developed originally in order to update the input-output tables. Another limitation is that those may not be uniformly developed for all industry sectors and the absence of some industry classes may undermine the accuracy of a specific sector.

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

161. In the event that sufficiently detailed surveys are not available or are costly and time-consuming for a particular country, some thought could be given to identifying estimates based on:

- regional input-output tables. A possible problem with the use of regional tables is that there can be significant divergences within a region;[103] and
- average value added relationships. This may be feasible if there is a consistent (or near consistent) value added per unit of measurement (e.g., person, output, business, establishment, etc.) for specific copyright-based industries (either globally, within regions or for countries at similar stages of economic development).

162. In both these cases, the simplification mechanism suffers from a serious constraint: it would average out differences between countries when, in fact, the purpose of the exercise is to identify country-specific contributions.

(c) GTAP derived input-output tables

163. Another work-around may be to build simplified domestic input-output tables from the Global Trade Analysis Project (GTAP) database.[104] GTAP is the world's largest consistent economic database which:

- divides the world into 66 nations or regions, although many of the countries in the GTAP database already have advanced input-output tables; and
- includes a full input-output structure that divides each economy into 57 separate sectors. It is clear is that this approach does not allow significant disaggregation of the economy to provide detailed copyright industry analysis. While "paper products, publishing" may appear to be the most copyright-related sector, it is likely that much of the copyright-based industries are in the service sectors. What is possible, however, is to make some estimate as to the relative size of copyright within some of these sectors, and hence to disaggregate them for the sake of the analysis.

5.4. Employment in the Copyright-Based Industries

164. Employment is a variable of major importance in the economic analysis of productive activities, and this is also the case with respect to the copyright-based industries. In general, copyright-based activities are relatively labor-intensive, and there are thus many expectations surrounding their effect on a country's employment and the personal income of the labor force.

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

- from input-output tables;
- from industry-specific studies conducted by official statistical agencies, government bodies or private parties;[105] and
- 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.[106] The problem with census results, however, is that they are static in that they reflect employment on a single day every five years.

166. There is some merit in measuring employment by a variety of indicators that complement each other, including:

- employment;
- payroll;
- jobs;
- FTE – full-time equivalent employment; and
- total hours worked.

167 . While acknowledging that in many copyright-based industries, employment is not on a permanent or full-time basis, the measure of employment should be on a FTE basis, with other measures provided as additional descriptors, if considered necessary.

168. The problem one might face of 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 the copyright industry. Thus, there is a potential for double-counting if payroll is relied upon as a key indicator.

169. Similar to the analysis described in Section 5.3.2.2., it is possible to conceive of a number of methods of developing estimates of employment. Those 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.

170. All the provisos listed in Section 5.3. apply equally to the generalized assessment of employment.

5.5. Foreign Trade

171. The position of a national copyright-based industry in terms of the imports and exports of a country is an indicator that may reflect tendencies that deserve policy considerations. 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 that copyright, as part of intellectual property, has in international trade negotiations.

172. The analysis of the international trade position needs to capture two elements:

(a) the physical trade in copyright products and services – this is a relatively easy element to capture because of the availability of statistics from:

– national statistical agencies and central banks;

– supra-national statistical agencies – in particular, trade databases from the International Monetary Fund (IMF)[107] and the World Bank[108] and the Global Trade Analysis Project (GTAP)[109] provide comprehensive statistics on global trade flows. It needs to be remembered, however, that for the most part such databases are reliant on the provision of information from national statistical agencies and governments;

– major industry associations – associations in the major copyright sectors such as music and film tend to compile and publish international trade statistics; and

– specially-developed surveys would always add to the information compiled, while adding to the overall cost of the study.

(b) royalty flows – this information is likely to be highly susceptible to variation and sampling errors, and is less likely to be available in developing countries.

173. While the standard approach has tended to focus on dollar values of the trade flows, a complementary approach may be to assess the copyright share in a country's trade.[110] An example of a similar analysis is shown in Table 5.1. It could be broadened by adding the royalty flows as identified above.

Table 5.1. Trade in Copyright-Dependent Goods[111]

Country	Share of copyright material in merchandise exports	Share of copyright material in merchandise imports
Australia 1996-97	0.5	2.2
Australia 1986-87	0.2	2.3
Australia 1976-77	0.2	1.9
1989[112]		
EC-12	0.8	0.7
Belgium-Luxembourg	0.5	0.8
Brazil	0.1	0.7
Denmark	0.9	0.8
European Free Trade Agreements (EFTA)	0.4	1.1
France	0.6	0.8
Germany	0.8	0.7
Greece	0.2	0.5
India	0.1	0.4
Ireland	4.9	1.0
Italy	0.4	0.5
Japan	0.8	0.4
Netherlands	1.0	0.9
Portugal	0.2	0.6
Republic of Korea	1.3	0.2
Spain	0.6	0.6
United Kingdom	1.1	0.9
United States of America	1.1	0.5

174. Given the interconnectedness of world trade, it appears there is a need for introducing ongoing reporting of physical (and possibly intangible) trade flows in copyright material within the respective international framework.

5.6. Institutionalizing the Preferred Analytical Framework

175. The approaches discussed in the previous sections reflect, the mainstream analytical frameworks being employed with respect to the analysis of the economic contribution of copyright-based industries.

176. The process of methodological standardization in surveys of copyright-based industries across the globe can draw useful lesson from the achievements of the tourism industry.[113] This latter industry has worked hard to convince supra-national and domestic statistical bodies to standardize the assessment of the size of the tourism industry in what are known as "satellite accounts." Satellite accounts are extensions of the core System of National Accounts (SNA). The aim of a satellite account is to present information that 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.

177. What distinguishes the tourism satellite account from the studies conducted for the copyright-based industries is that:

- a globally recognized standard has been developed;[114]
- national and supra-national statistical agencies were intimately involved in the process of developing the standards; and
- the process has been institutionalized and accepted by governments (i.e., the accounts are not first prepared by the tourism lobby itself) and hence there is a sense of independence and authority about the accounts.

178. It is worth noting that, while not absolutely prescriptive, the data in the tourism satellite accounts have the same characteristics as those described under the general principles, in Section 5.1., to apply to measurements of copyright-based industries.

Chapter 6: The Measurement Procedure and Apparatus

6.1. General Overview

179. This Chapter makes proposals on how to organize relevant information, how to structure the research, what measurements to use and how to present the analysis. Attention will be paid to certain general limitations and difficulties that have been faced in past studies. It will thus not propose solutions to specific national situations. The proposals outlined in the Chapter provide a set of tools that should assist the team in its research work. The material and conclusions proposed are based on the analysis of existing and applied approaches and methods in past national studies.

180. There is no single, perfect means to measure the contributions of copyright. Different methods in studies so far have both strengths and weaknesses. If cross-national comparisons are to be undertaken, it is imperative that comparable methods be employed so that the studies measure the same items in the same way. This will still not account for differences that exist because of data counting differences in national statistics, but will provide a clearer comparative basis for analysis than what exists today.

181. Significant attention in the survey should be given to the choice of approaches and methods for surveying value added, employment and foreign sales. The survey will always reflect a combination of methods and approaches. This choice is likely to be influenced by the availability and organization of national statistics. Applying methodologies recommended by the System of National Accounts, and using International classification systems is recommended in this Chapter as it could streamline future research work.

182. The unavailability of data in some areas will inevitably necessitate the application 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 used preferably for establishing ratios that can not be calculated otherwise. Any supplementary data or methods should be handled with care. Information obtained through these sources should be representative in character and could be used as a basis for deriving industry estimates.

183. A number of problems will inevitably have to be faced by the teams conducting the survey. Those could be addressed more successfully through international cooperation and regular exchange of information and experience.

184. The measurement procedure should comprise the following four steps:

(1) identification and classification of the copyright-based industries;

(2) collection of relevant data;

(3) measurement of the contribution of the copyright-based industries; and

(4) analysis and presentation of the survey results.

6.2. Step One: Identification and Classification

6.2.1. Identification of Economic Activities to be Studied

185. A principal objective of the survey is to present a comprehensive and credible picture of the industries producing measurable and quantifiable contribution 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 *the Guide*. It is very important that coherence should apply to the inclusion of copyright-based industries that have been identified and broken down in the four subgroups described in Chapter 4, so that international comparisons can be made. As explained earlier in *the Guide*, the comprehensive list of core, interdependent, partial and non-dedicated support industries would catch the copyright effects created throughout the economy.

186. At this first stage of the research the composition of the team needs to be set. It is essential that it includes experts in economics, law and statistics, preferably with some knowledge of the cultural sector. When addressing the analysis of industry activities, one could consider working in parallel on the four main categories of copyright-based industries, so that appropriate information can be identified and adjustments be introduced with regard to the chosen indicators – value-added, employment and foreign trade. That would allow the team members to benefit from information collected relative to inter-linkages and dependence between and within industry sectors.

187. Identification of the copyright-based industries involves an analysis of their contribution throughout the following stages of the copyright chain:

(1) content creation – expressions of original ideas, formatting and processing of works;

(2) production of original works;

(3) distribution, including manufacturing of the tools and equipment for distribution, marketing and promotion of works; and

(4) consumption and use of the works, including manufacturing of the equipment and devices to use the works and other subject matter.

188. Obviously the activities related to production, distribution and use of copyrighted works and other subject matter differ in different categories, e.g., between products of the printed and electronic media.

189. The next step within this phase will be to review the list of the copyright-based industries, proposed in Chapter 4 and adapt it to the country specific situation as it is possible that not all of these activities are present in a given country. This would imply collection of information about the industries that will be studied, checking the compliance with the copyright and related rights legislation (which would mean excluding industries that are not protected under copyright law), analyzing the layers of economic activities to be studied. The adjustments introduced in this regard would need to be fully explained in the survey.

6.2.2. Classification of Industries

190. The classification of the industries is closely linked with the process of data collection and data availability.[115] A starting point would be to locate the source of appropriate data on industry activity. A major issue to be addressed is the level of compatibility of industry statistics with information needed to calculate value added. To address this difficulty, it is recommended that due attention be given to the respective international standard industry classification codes.

191. The International Standard Industrial Classification (ISIC) is a standard United Nations' classification of economic activities arranged so that entities can be classified according to the activity they carry out. 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 and divisions, the 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. Despite the word "industrial" in its name, ISIC is not just a classification of industries.[116]

192. Each activity according to the ISIC methodology is placed under a respective hierarchy, Section, Division, Group and Class. Detailed explanations are also provided on what is included and excluded from the respective categorization.[117] Even though the ISIC is only a recommended United Nations standard, the third revision of the ISIC is currently used by 93 countries (as compared to the previous one ISIC Rev.2, which was used by 49 countries[118]), which indicates that this standard is fast becoming universal.

193. Annex II offers a table of the copyright-based economic activities and the corresponding codes of relevant activities. The codes referred to are based on the draft ISIC Rev.3.1, as updated on 21.02.2002 by the United Nations Statistical Commission.[119] The previous third revision of the ISIC dates back from 1990.[120] In the period since the 1990 publication, the economic reality in most countries has changed at an unprecedented rate, new activities and forms of industries have emerged. Compared to the third revision, the update contains, among others, some new alternate aggregations and extended definitions of individual classes, drawing on research work already done for other classifications. In Annex II are proposed the classifications according to the ISIC Rev.3.1 (2002 update) instead of the Rev.3, since they are closer to existing realities. However, for those using the ISIC Rev.3 codes, the correspondence with previous codes is available on the United Nations Statistical Commission's web site.[121] At the same time it has to be noted, that the process of the revision of the current ISIC will be completed only in 2007.

194. The table shown in Annex II follows the list of the copyright-based industries, as contained in Chapter 4. The table's aim is to provide the research team with an idea as to where the respective activity can be found in statistical terms, but it remains only indicative as the form and content of national statistics available in a given country may differ. With respect to the industry classes indicated it should be noted that in certain cases the table contains more than one industry class corresponding to a copyright-based activity, which means that the same activity can be reported under different classes. It will be up to the national statistical expertise to decide which is the more appropriate one in terms of national accounting practice. In many of the past studies the ISIC codes have been used and a decision has to be taken as to where the main bulk of the specific copyright-based activity is reported while at the same time double-counting has to be avoided. While the ISIC methodology gives only a pattern, further details and data can be obtained from the National Accounts and other official statistical publications in each country. At the national level, data may be disaggregated to a more detailed level, as compared to the four digit classes in the ISIC.

195. In some countries, for example in the member states of the European Union, other industrial classifications such as NACE (General Industrial Classification of Economic Activities), CPA[122] (Classification Products by Activity) and PROCOM (Community statistical survey of industrial production) provide up to seven digit breakdown of activities which can be very helpful.[123] A list of corresponding classification category numbers to the copyright-based industries is contained in Annex III. While this is only a regional example it provides a perspective on useful information that is available under other statistical frameworks. In this particular case it should be underlined that a great degree of correspondence already exists between ISIC and NACE and many national statistical offices have developed correspondence tables between the codes under the two classification systems[124].

6.3. Step Two: Collection of Relevant Data

196. Data collection is crucial for the survey and may be difficult and time consuming. The Table of Industries as proposed in Chapter 4 (Annex I) and the classifications proposed in Annex II and Annex III have to be adjusted to the national statistical systems and accounting procedures. It has to be kept in mind that in some of the identified industry classes a number of activities are reported together. In the case when a specific copyright-based economic activity is reported together with other activities, it has to be separated from the aggregate numbers. Where disaggregation levels are not adequate, different techniques could be used to extract the appropriate proportions (see also 6.4.4.).

197. The collection of data would involve as a first step compiling all available official statistical publications of relevance, where details by industry may be found. A table of the data sources used in the survey is indispensable and should be attached to the survey.

198. This ground work on compiling statistical data would involve three stages:

- compiling available official statistical data by industry classes;
- compiling additional statistics disaggregating the data to the required level of detail; and
- identifying white or grey areas, preparing and sending out questionnaires where statistics are not available.

199. Further on in this Chapter some proposals will be made with regard to finding out missing figures on activities that are not reported nationally (see also 6.4.1.4. and 6.4.4.).

200. Important information sources would be the national accounts, industry specific statistics, national surveys and specific reports prepared by the national statistical office, industry reports commissioned by the government, other types of statistics on branch and company level, product statistics, balance of payments figures, external trade statistics, government tax revenues and the national budget.

6.4. Step Three: Measurement of the Contribution of the Copyright-Based Industries to the National Economy

201. 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.

6.4.1. Measurement of Value Added

202. In assessing the economic contribution of an industry, the most common measurement is the use of value added or gross value added (GVA).[125] The methods for establishing the value added in a productive economic activity are explained in detail in the System of National Accounts 1993, developed jointly by the Commission of the European Communities – Eurostat, the International Monetary Fund, The Organization for Economic Cooperation and Development, the United Nations and the World Bank under the auspices of the Inter-Secretariat Working Group on National Accounts.[126] Those methods are largely used by the national statistical agencies in the process of compiling and processing data in their own national accounts systems.[127]

6.4.1.1. Composition of Value Added

(a) Composition of value added

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

(1) Value added = Output *minus* Intermediate Consumption

(2) 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

204. Sometimes the first method has been referred to as indirect calculation and the second one as direct calculation.[128]

205. In the two approaches, the following definitions and understanding are applied:

- *Output* consists of those goods or services that are produced within an establishment that become available for use outside that establishment.[129] 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;[130]

- *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.[131] 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 the production;

- *Operating Surplus/Mixed Income* is the surplus or deficit accruing from production before taking account 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.[132] The distinction between operating surplus and mixed income depends on the type of enterprise;

- *Compensation of Employees* is the total remuneration, in cash or in kind, payable by an enterprise to an employee in return for work done by the latter during the accounting period. It does not include any taxes payable by an employer on the wage and salary bill, which 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;[133]

- *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 upon the benefits that 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 that 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,[134]

- *Indirect Taxes* are taxes that 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 those taxes should be specifically identified by their purpose – taxes on products[135] and other taxes on production;[136] and

- *Subsidies* is current unrequited payments that 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.[137] Other subsidies on production consist of subsidies, except subsidies on products, which resident enterprises may receive as a consequence of engaging in production.[138]

(b) Data on value added

206. Having defined the categories and understanding, one has to identify data relevant for the calculation of value added. Such data may not be directly available. Once official sources have been exhausted with the regard to the categories necessary for the calculation of value added, the grey and blank areas have to be identified. At this point, other available sources should be explored. It should be kept in mind that the calculation of value added can not be addressed before the total output of an industry has been established.

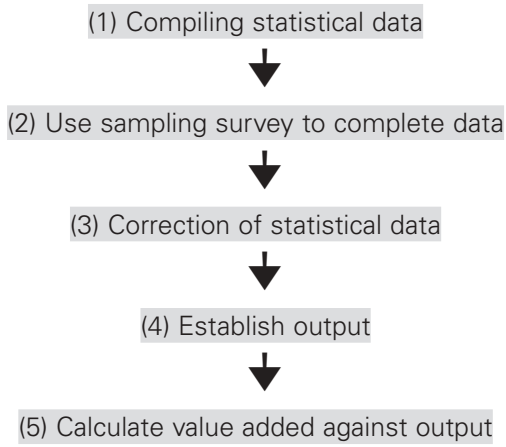
207. With regard to data on value added, the Copyright White Paper prepared by the Japan Copyright Institute, suggests the following systematization of the statistics applied – basic (official data), basic plus supplementary (official and business-generated) statistics, and supplementary (only business-generated). In the first case the calculation can be based entirely on official statistics, there is full correspondence between the ISIC classes and the classification of the copyright-based industries proposed. In the second case basic plus supplementary statistics, the calculation would be anchored predominantly on basic sources, there will not be full correspondence between the ISIC classes and the classification of the copyright-based industries, but the aggregate industry class may consist of industries with analogous cost structure. In the third case, when only supplementary statistics is available, there is no correspondence between ISIC and the classification of the copyright-based industries. In that case one would make use of the following three main types of information on value added:

(1) value added rates extracted from financial statement reports for representative enterprises in the industry;

(2) value added rates for the entire group of industry; and

(3) compensation data.[139]

208. On the basis of existing experience the process of compilation and processing of statistical data on value added can be described as broadly comprising of five stages,[140] described below. This sequence is one way of dealing with the data on value added.



6.4.1.2. Calculation of Value Added

209. In order to establish the value added for specific economic activities, one would need primarily data from which the cost structure can be analyzed. Many of the economic activities that are classified as copyright-based industries in this Guide are to be found in the manufacturing and service sector. Against this background, two approaches are recommended in the System of National Accounts with regard to statistics for goods and services – the income and the output (production) approach. (See also Chapter 5.3.1.). Both can be employed, depending on the availability of data and the organization of national statistics.

(a) The Output Approach

210. According to the output (production) approach value added can be calculated according to the following formula:

Value added = Output minus Intermediate consumption

The national accounts' aggregates can be obtained on the basis of the following data:

Output	⇨	Sales *plus* own account capital formation *plus* changes in inventories of work in progress and finished goods;
Intermediate consumption	⇨	Operating Expenses *minus* Depreciation Expenses
Operating Expenses	⇨	Total Expenses *minus* Financial minus Extraordinary Expenses
Depreciation Expenses	⇨	Output x Depreciation cost rate[141]

211. Intermediate consumption would then be calculated using the following indicators:

Table 6.1. Indicators for Intermediate Consumption

Indicator in the System of National Accounts	Other indicators[142]
Intermediate consumption	Raw and processed material, fuel expenses Services subcontract production costs, daily allowance Sales and General administrative expenses Advertising, marketing, accounting, data processing Transportation, lodging, storage, maintenance Special expenses Welfare expenses

212. The output approach is the preferred method in many countries with regard to market activities. It presents the GDP from the supply side. On the national scale, one would be looking for such indicators as the ones enumerated in table 6.1. A number of specific copyright-based industries may not be included in the supply side calculation of the GDP. For example, an industry like software or printing would be considered to provide products for intermediate consumption and their contribution to output may not be obvious or detectable in full. The danger may be that estimations underrate the contribution of the copyright-based industries. In some of the surveys, this approach has been applied predominantly with regard to services.[143]

(b) The Income Approach

213. The income components of value added are defined by the generation of income account.[144] Value added can be calculated using the following formula:

Value added[145] = Compensation of employees plus Operating surplus/Mixed income[146] plus Consumption of fixed capital plus Other taxes on production minus Other subsidies on production

The national accounts' aggregates can be obtained on the basis of the following data:

Compensation of employees	⇨	Wages and salaries *plus* Social contributions
Operating surplus[147]	⇨	Output (sales, shipments, imports, etc.) x (1 *minus* sales cost ratio minus ratio of general administrative and selling expenses);[148] or adjusted operating profit;
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, etc.
Other taxes on production	⇨	Output x tax rate; adjusted state budget revenues from taxes
Other subsidies	⇨	Subsidies on production, financing from the government.

Table 6.2. Calculation of Value Added Based on the Income Approach

	Components	Indicators to be found in national accounts	Other indicators which may be used
Value added	Compensation of employees	Wages and salaries Social contributions	Total cash wages and salaries paid
	Operating Surplus	Operating surplus Mixed income[149]	Operating profit, profitability coefficients, Cost rate of goods sold Sales and General administrative expenses rate
	Consumption of fixed capital	Consumption of fixed capital	Bookkeeping depreciation, Depreciation of tangible fixed assets Write-offs of tangible fixed assets
	Other taxes on production	Taxes on products and other taxes on production	Output x tax rate[150] Tax revenues of the state budget
	Other subsidies on production[151]	Subsidies on products and other subsidies on production	Financing from the state budget

214. The income approach allows an alternative calculation of GDP, whereby the GDP is represented as the sum of incomes pertaining to the main production factors: capital and labor. It is a recommended approach for surveying non-market activities but can also be applied for other economic activities. The income-based calculation of GDP can sometimes be more accurate in terms of establishing the contribution of specific industries. The GDP obtained through this method is calculated as the sum of the value added of all industries in the economy. This method has been applied predominantly to goods in some of the studies.[152] The categories one would be looking for may be referred to under 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.

(c) Supplementary Approaches

215. For some copyright-based industries, the supplementary approaches to calculating value added described below may present a possible way to deal with the information missing. Information obtained in this way is representative in character and could be used as a basis for deriving industry estimates. The character of the data obtained through this methods should be highlighted when presenting the findings of the survey.

Calculation of value added on the basis of financial statement reports

216. Income statements (or company accounts) are organized according to national accounting standards, regulations and procedures. Even though they may differ across countries, they would normally contain information on output or turnover, number of employees, compensation of employees or total costs of employment, operating surplus or profits and depreciation cost. Income statements would be an information source with regard to establishments providing goods and services. This method is sometimes referred to as the extrapolation method.[153]

Table 6.3. Relevant information on value added derived from financial statement reports[154]

Output		
Cost of goods (or services) sold	Cost of goods manufactured (or service provided)	Material cost Labor cost Depreciation expenses
Sales and general administrative expenses	Employment cost	Salaries Reserve Compensations
	Depreciation expenses	
Operating profit		

217. Value added ⇨ Compensation of employees *plus* Operating surplus/Mixed income *plus* Consumption of fixed capital plus Other taxes on production *minus* Other subsidies on production

Compensation of employees ⇨ Number of persons employed *times* Labor costs/person

Operating surplus ⇨ Operating profit

Consumption of fixed capital ⇨ Depreciation expenses

Taxes on production ⇨ To be calculated from Sales

Employment approximation

218. When for a certain category a credible direct value added statistics is missing, it may be possible to calculate value added with the help of statistics on employment and earnings. This work-around method has sometimes been referred to as employment approximation. If data on the number of people are employed in a certain industry are available, the average salary in this sector can be determined, which, multiplied by the number of employed, would give an idea of the total labor income. Wages and salaries should be corrected with a percentage to cover non-wage costs of employment such as pensions, social security or pensions contributions.[155] At the next stage, one would have to find out if the activity is capital intensive (level of use of capital goods) and its needs for rental (of buildings for example). On this basis, one may calculate how much capital and rental income is generated in this sector. The sum of labor income and capital/rental income can give an idea of the missing value added. When absolutely no data is available for the approximation purposes you may use the economy average indicators can be used for the proportion that labor income occupies from value added. Gross value added could then be approximated by total costs of employment plus profit.

Specific surveys

219. This approach would involve conducting specific surveys on industry value added, if resources are available. It has been used in past studies. When surveys are involved and the data is incomplete, certain adjustments will have to be made (see subsection (d) "Corrections and adjustments").

220. Analogies are often used when studying industries with analogous cost structures – e.g., in record rental and video rental the same rate of value added of this class could be applied if data and full class correspondence are lacking in regard to a particular type of activity.

221. Other approaches that to a certain extent could be employed in value added calculation, are discussed under in Section 6.4.5. ("Establishment of the copyright factor").

(d) Corrections and Adjustments

222. Corrections and adjustments of the industry data compiled should take place before the calculation of the value added. The correction of data should be applied at various stages of the survey with regard to:

- incomplete data obtained from basic statistics – for example missing categories;
- samplings; and
- necessary conversion of data.

223. Usually the correction would imply developing coefficients with regard to the entire sector, which have to be individually adapted and amply reported in the study. In the third case when conversion of data from current prices to constant prices is needed, a deflator will have to be used in order to adjust the fluctuation. The deflators are different for the different industry sectors and are to be found in the national statistics. When used, the level of constant prices would be calculated as a division of the current price by the deflator value.

224. Adjustments are needed with regard to data from different years. In some countries data on output and value added are developed by the government offices on an industry by industry basis. However, these data usually lay behind other industry output data often covering more than a year. In such cases use can be made of dated value added relationships, which can be applied to more recent measures of industry output, in order to derive current value added relationships. The rational behind it that productivity in an entire industry does not change dramatically over a few years.

225. If other types of more disaggregated statistics are available in other statistical publications (on a quarterly or specific industry basis), those should be calculated as a percentage of total outputs and then applied to the four digit categories in the ISIC compatible statistics.

6.4.2. Measurement of Employment

226. Another widely-used indicator to assess the copyright-based industries' economic contribution is to measure the number of people involved in creation, production and distribution of copyright goods. These figures include those employed by the firms in copyright-based industries and independent artists, as specified in all 59 categories of Chapter 4. The economic contribution is then expressed as a proportion of total employment in the economy or the working population. In Chapter 5.4. some additional indicators on employment have been proposed such as payroll, jobs, total hours worked, etc.

227. Employment has not been reported in all of the past surveys. However, this indicator is of great social importance and may be the key to calculating value added if data on the latter is not otherwise available.

228. Normally the national bureau for labor statistics of a given country would use the standard industrial classification codes as described earlier. This could be the starting point for calculating the total employment in the said industries. The data, however, may represent the total number of persons employed full or part time, including temporary employees, without breakdown. This situation which may be typical for a number of the copyright-based industries can be dealt with by using coefficients and approximations in order to obtain full-time employment equivalents.

229. Labor statistics is often reported on a monthly, quarterly or yearly basis. It is recommended to work with the averages of the monthly measures for each calendar year.

230. Where the national statistical agency issuing labor statistics does not report the employment for an industry to the level of detail needed for the purpose of the survey, the value can be estimated by applying to the employment measure of the broader category the ratio between the value added of the narrower category and the broader category. This approach has been employed in some of the existing surveys.[156]

231. Only in the case of the core copyright-based industries should the employment be taken as 100%. The copyright employment for each industry from the interdependent, partial and non-dedicated support industries can be calculated by multiplying the total employment for each industry, established through the procedure described so far, by the corresponding copyright factor[157] established through the weighting approach chosen (see subsection 6.4.5.).

232. When introducing estimates of employment, use could be made of the methods described in Sections 6.4.1. and 6.4.5. as well as those mentioned in Chapter 5.4. (regional input-output tables, average relationships between employment and output, regression analysis across countries).

233. As suggested earlier, the number of employees in the copyright-based industries can be obtained by analyzing the following three types of sources:

- regular labor statistics (e.g., from input-output tables);
- industry specific statistics; and
- occupational classifications obtained from the official census.
  Those data can be meaningfully used, only if they are recently produced.

234. When information is not sufficient, one should try to find a work-around method. For example, in most nations, distinctions are neither made between full-time and part-time labor nor are they reported in this way. Having only information on how many people work in the specific industry may require search for data on how many of those work part-time. On this basis can be calculated the full time employment equivalents.

235. In summary, the presentation of employment included in the survey may incorporate the following indicators:

- industry/economic activity;
- ISIC or SIC code;
- industry position in national statistics;
- copyright factor;
- total employment figure for the industry;
- copyright related employment; and
- percentage of national labor force.

6.4.3. Measurement of Foreign Trade

236. The weighting process represents the establishment of the proportion of the copyright-based component of an industry. It has to be done in relation to all industries that are not core copyright-based industries where the contribution will be counted as 100%. More efforts should be applied in measuring the interdependent copyright industries, since their contribution is usually bigger than that of the partial and non-dedicated support industries. For example the copyright factor in the paper manufacturing industry (representing the interdependent copyright industries) is estimated at 90% in the Australian study; the copyright factor in games and toys manufacturing (representing one of partial copyright industries) is estimated at 50% of the total value added of this particular industry in the US study and 48% of the value added in the Australian study. The copyright factor in transportation (representing non-dedicated support industries) is estimated at 6.3% of the value added in the railroad services in the US study.[158] 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 industries that are to be found in the non-core groups. The weighting process demands that research teams be creative in finding workable solutions.

237. Some of the past studies[159] have included only the export of copyright-protected material, while others[160] have presented the trade balance for both copyright and copyright dependent industries.[161]

238. An important consideration to keep in mind is the distinction between export of physical goods and royalty flows. There are three steps in measuring the share of copyright products in foreign trade:

(1) identifying the trade in goods and services in the copyright sector (i.e., excluding royalties, not attached to goods or services);

(2) identifying the flow of copyright royalties (not embedded in the price of physical goods and services) – trade in royalties and license fees reported annually; and

(3) combining the goods and services flows with the royalty flows.

239. In respect of foreign trade, surveys or more specific industry statistics may often be needed to produce reliable estimates. The problem is related to the categorization of copyright-protected goods in statistics. For example an export of a motion picture in statistics may appear only the export of physical goods, i.e., tapes or discs. Some of its value may be reflected under foreign rentals. In general, statistics may fail to capture the export or import of cultural goods worth millions of dollars.

240. The presentation of foreign trade statistics is often done in tables representing the service components of international transactions, such as:

- royalties and license fees;
- other private services;
- travel related services; and
- other services.

The data on imports and exports should be targeted for each of these classes.

241. Another problem is that royalties and license fees may not always be broken down into industry categories. So if all royalties are not measured, then there will be a clear underestimation of the total value of the copyright-based industries in foreign exports. Trade statistics for more traditional classes such as books, newspapers and periodicals, etc. should be readily available. Foreign sales of record companies appear in statistics as a separate category and could also be surveyed without major difficulties. However, some of the other kinds of commercial exploitation may not be reported (for example licensing fees for use of recordings and broadcasts). Indications for the scale of foreign sales of film companies may be obtained from film associations, film marketing institutions, etc. which may have information on independent film makers and bigger studios as well.

242. Software exports and imports are a major category which needs to be studied specifically. This data is not recorded to a sufficient degree in many countries. Industry associations and company information may provide some estimates in this field. Official surveys of the software industries should be looked for and encouraged because this is a major exporting industry in a significant number of countries.

243. When measuring international trade in copyright-protected products, wide use has been made of national, as well as international trade statistics, such as those of the World Bank, the International Monetary Fund, the World Trade Organization, Unesco, etc.

6.4.4. Establishing the Copyright Factor

244. In analyzing any copyright-based industry one faces the problem of how to eliminate elements that can not be fully attributed to copyright. Even if one knows that a copyright-related input exists to some extent, it cannot be easily measured and would thus not be taken into account.[162] This situation is related to the problem of inclusiveness and exclusiveness of the survey. The concept of introducing weightings is to reduce these uncertainties to an acceptable minimum. The weighting of the portion of a specific industry that can be attributed to copyright or the level of dependence on copyright has been referred to in some of the surveys as the copyright factor.

245. The weighting process represents the establishment of the proportion of the copyright-based component of an industry. It has to be done in relation to all industries that are not core copyright-based industries where the contribution will be counted as 100%. More efforts should be applied in measuring the interdependent copyright industries, since 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 industries that are to be found in the non-core groups. The weighting process demands that research teams be creative in finding workable solutions.

246. The weights will have to be applied before summing the portion of the value added, employment or foreign trade attributed to copyright with the other contributions of the core copyright-based industries. In order to obtain the overall contribution of all industries, the copyright-related value added, employment and foreign trade of each industry are then totaled together.

247. The following considerations should be borne in mind when establishing the copyright factor through weightings:

- The weighting reflects the structure, the organization and the logic of an economic activity. That 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, new organization of the industry occurred with subsequent industry definitions changes. So once weightings are already established, those could be used for updating subsequent studies;

- International comparisons can be an important source of information. Those could be applied with regard to countries with similar legal framework, industry structure, production practice, working conditions, or other economically significant factors. A number of limitations are typical for this approach – the assumption implies a similarity of production, consumption patterns and productivity level in branches and sub branches, and it may be difficult to adjust data accordingly if important information is missing.[163] Such an approach has been used in the Norwegian study, where certain assumptions have been based on the patterns from the Finnish study.[164] Estimates have been used with regard to missing data on output in certain categories by way of applying the following formula:

$$\left(\frac{\alpha_1}{\beta_1}k + \frac{\alpha_2}{\beta_2}k + \cdots + \frac{\alpha_n}{\beta_n}k\right) / n$$

where

a – represents the reported Norwegian turnover
ß – is the turnover share in the Finnish data corresponding to a
k – is the share of the Finnish turnover equivalent to the missing Norwegian value
n – is the number of categories in the sub-branch

When productivity in countries is similar as was the case with Norway and Finland, a ratio for value added/turnover can be established on the basis of the existing data in one of the countries and then applied to the country where the information is missing;[165]

- sampling is a widely used technique in the surveys. It often implies carrying out specific interviews or sending questionnaires. In this approach, one would identify within each sector a number of (five or more, depending on the industry size) firms or establishments.[166] The sample has to be representative in character, i.e., it should include large, medium and small firms. The interviews should be conducted and questionnaires should be sent out to experts who are responsible for the overall functioning of the firm. Through the interviews in the sample, one would seek to establish such elements as – resources spent on copyright payments, number of employees (full time or partial) assigned to the creative field, share of sales depending on copyright, organizational units charged with creative tasks or handling copyright aspects, future trends and positioning of the business dealing with this category of products, the company's own estimation on the dependence of the firm's output on copyright.[167] Those questions have to be specific with regard to the industry group studied and to the measurement indicator (i.e., those may be different when establishing value added, employment or foreign trade). Then the percentages would be averaged for each sector. The result may represent a basis to be used for a number of years. An example of some of the questions that are proposed to be addressed is contained in Annex IV of *the Guide*. "Checklist of items to be addressed when undertaking a sample analysis". The Annex highlights indispensable as well as additional

information that should be targeted in order to obtain relevant information. The main problem with the sampling analysis is that it is costly and time-consuming. Therefore one should try to limit the questionnaire to issues that are easy to report;

- in the complete absence or unavailability of data in certain categories, use could be made of assumptions or estimates. Inevitably this method can cause reliability problems. One way of dealing with them is spelling out in full the assumptions. Some of the studies have explicitly listed the assumptions made. Those assumptions would imply introducing assumption coefficients that 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. An approximated average of the contribution of the non-core groups, based on the results from the past studies, would indicate that this contribution is around 30% of the entire contribution of all copyright-based industries.[168] Consequently, the proportion that may be adopted would have to reflect smaller contribution within this average with the drop of the level of dependence of industry groups on copyright in each non-core industry. The estimation of such average proportions could be fine-tuned when a sufficient number of studies following the recommendations in *the Guide* have been implemented; and

- in some of the studies where distribution industries have been identified separately (the US study), the following weighting has been applied – a ratio has been calculated of 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 every year according to the relative contribution of the copyright-based industries in the other sectors of the economy.[169]

248. In summary the procedure of establishing the weightings would combine several approaches or techniques and would include the following stages:

- analyzing the components that make up each sector and the scale of activity, associated with each component;

- considerations of ratios used in previous national studies or comparable research done elsewhere; and

- consultation with representatives of the industries concerned (interviews and questionnaires).

6.4.5. Other Methods

249. Studies in the past have used different methods and applied different sets of indicators. Some of those are illustrated in Table 6.4. On the one hand, they highlight some of the difficulties in international comparisons of existing studies. On the other hand, they underline the overall importance of the recommendations in this Guide, which aims at finding a common understanding of what should be studied and the overall methodological principles that should be applied.

Table 6.5. Methods Used in Some Studies on the Contribution of the Copyright-based Industries

Country	Value creation	Employment	Foreign trade
Australia	IGP[170]/GDP	Number of employees	Export and Import of Copyright works and fees
Austria	Value added/GDP	Number of employees	No
Finland	Value added/GDP	Number of employees	No
Japan	Value added/GDP	No	No
MERCOSUR	Value added/GDP	Number of employees	Export and Import of copyright works
Netherlands	Value added/GDP	Number of employees	No
Norway	Value added/GDP	Number of employees	No
United Kingdom	GVA/GDP	Number of employees	No
United States of America	Value added/GDP	Number of employees	Export/Foreign Sales of Copyright works

250. A widely-used method, is the method of measuring the value added, created in the copyright-industries as a percentage of GDP. This method has a number of shortcomings related to its inability to differentiate between copyright-related and non copyright-related activities within a selected industry sector, the inevitable omission of some elements, related to copyright in industries which are not included in the study and the difficulty in identifying which part of the value is added to the product while creating and producing it and which part is added in the modification, distribution or consumption phases of the value chain. This may not allow more in-depth analysis.

251. Most of those the above-mentioned shortcomings could be overcome when applying a value chain analysis, as suggested in the 2000 Finnish study.[171] This analysis would measure the actual economic impact of copyright rather than that of copyright-based industries. It would also identify and count the parties involved in the process of creating, producing and distributing copyrighted works. This analysis would have to be carried out in all industries, where copyright creates value.

252. The value chain analysis has one practical problem. It is much more complicated to carry out than the traditional methods of measuring the economic contribution of copyright. The method requires detailed company or individual specific data that usually are not available in national statistics. This means that the empirical challenge of this method is much greater than that in traditional methods.

253. Another method indicated in the Finnish study is the capitalization of copyright assets, which would be complementing rather than replacing "the traditional method."[172] It would imply projecting the future value of copyright assets to the present moment, i.e., it contains a speculative element. However, for the valuation of copyright assets there are no standardized methodologies at this stage and more research will be needed in the future.

6.5. Step Four: Analysis and Presentation of the Survey Results

254. A major task for the survey is the presentation of the findings. It is very important that the findings be based on sound facts and that the conclusions derived from them be thus credible. The findings in the survey could serve the following main objectives:

- raising awareness of the importance and real contribution of the copyright-based industries;
- positioning of the copyright-based industries in the context of the national economy by calculating their share of the GDP, contribution to employment and foreign trade;
- comparing the results with surveys on the copyright-based industries in other countries which are important trading partners; and
- adjusting national legislative (for example copyright enforcement regimes) and statistical practices (for example introducing satellite accounts on copyright related statistics), adapting trade and economic and public (e.g., subsidies, infrastructure development, facilities for creators) policies to the results of the findings.

255. For an analysis of the content, the study should generally seek to:

- state clearly the trends observed and illustrate them by comparisons over time, especially if they build on past research;
- illustrate the dynamics in the copyright-based industries by indicating the growth rates in the various categories measured;
- observe developments in the different industry groups and highlight important markets which may have not been treated with due attention;
- highlight in economic terms contributions that can attributed to cultural workers;
- demonstrate the contributions of the copyright-based industries in fields where such contributions have traditionally been overlooked;[173]
- indicate the type of sources, methods and approaches used, pointing to the reasons for choosing them in the study and to interpretations and approximations used; and
- explain adjustments that have been made with regard to specific economic activities including aggregations or omissions or different groupings.

256. For the presentation of the statistics gathered, the study should:

- create tables and diagrams for the data used and collected. Those tables could provide useful information with regard to aspects such as the following: relation between value added and output; growth and contribution per industry group and sector as compared to the entire economy; the applied methods to the analysis of different groups of industries and indicators; industry class correspondence; scale of the market occupied by the industries and their increase in rates; terminology adjustments; comparisons with contributions by other industries; information on nominal and real values; references used;

- aggregate spreadsheets are recommended. Those could be filled as the work on the compilation of data progresses. Once an indicator is established it should be introduced in the spreadsheet so that work can focus on the blanks in the table and work-around methods. For various reasons one may opt not to include the detailed findings with regard to all industries in the final presentation and just aggregate figures;[174]

- providing details of the sources used under the different headings 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 in view of its reliability and regular implementation. The survey has to be performed in close cooperation with the national statistical office, which can not only supply information, but provide important methodological clarifications and advice, including indispensable support for future studies; and

- an executive summary of the survey is always an important part of it and is particularly useful for awareness purposes. However, this does not diminish the importance of publishing the more comprehensive research findings. This could add to its credibility and facilitate international comparisons and exchange of experiences. It will be particularly important to present the survey methodology followed in those cases when research in this field is undertaken for the first time.

6.6. Expected Deliverables at Each Step of the Survey

257. When preparing the survey, one should be clear as to what are the steps to be undertaken and the results expected at each step. The following table could be useful in determining how the study is progressing.

Table 6.6. Steps in the Survey and Expected Deliverables

Steps	**Step 1** Identification and classification of industries	**Step 2** Collection of data	**Step 3** Measurement of the contribution of the specific Industries	**Step 4** Analysis and presentation of the results
Main elements	Set up the research team Check copyright legislation Analyze copyright chain Verify ISIC codes correspondence	Identify relevant official statistics by industry group Identify blank areas Collect additional specific statistics Questionnaires/ Interviews/ Surveys Complete data	Decide on the method for each industry/ indicator Establish outputs by industry Adjustment of data Establish weights Establish value added, share of employment and foreign sales	Analyze main trends and tendencies Prepare comparisons Finalize spreadsheets and presentation tables and diagrams
Deliverables	Table of the industries to be studied Industry codes references established	Reliable desegregated data compiled	Contribution to value added, employment and foreign trade established	Survey on the contribution of copyright-based industries to the national economy

Chapter 7: Information Resources

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

259. This Chapter looks at the following aspects of the question:

- what are the information resources that can be used;
- what are the limitations of statistics; and
- what are the future trends in this field.

260. Identifying and working with a great number of information resources needs careful planning and can be a time and energy consuming part of any study which has to be based primarily, but not exclusively, on official statistics in order for the survey to be credible. Supplementary statistics will inevitably be needed but it should be kept in mind that it is purely indicative in character.

261. 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 agency and the specific professional groups representatives that would enable you to work your way through some of the grey areas.

262. The issue of credibility of the study could be addressed by providing transparent information on the information resources used and statistical methods applied. National statistics specifics with the regard to definitions, inclusions or exclusions of certain categories need to be fully explained in the survey.

263. Statistics has a number of limitations of scope and organizational character. Until further perfection of the methods those limitations should be borne in mind and carefully reflected in the survey.

264. Statistics is constantly developing. The methodology and measurement apparatus are being refined, conversion of statistical classifications is ongoing. International cooperation would be instrumental in developing the statistical agenda towards forms that will facilitate the monitoring and surveying of the copyright-based industries.

7.1. Scope of Information Resources

265. The information resources can broadly been divided into two groups – official and supplementary statistics.

7.1.1. Official Statistics

266. Official statistics mean statistical publications prepared or approved by the national statistical office or other agencies that have been assigned under national law with responsibilities for the collection, analysis and dissemination of national or international statistical information. Those publications have a number of advantages, such as:

- consistency and methodological coherence with international standards which facilitate comparisons across countries;
- regularity and predictability of the intervals of publications; and
- reliability and credibility of the data revealed.

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

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

- dependence on government priorities and budgetary resources, which can influence the scope of statistical work that can be undertaken by the national statistical office or other agencies;
- differences between countries in terms of national accounting rules and practices, which may influence the character of the data obtained and particularly the level of disaggregation of data;
- relatively long intervals between certain publications; and
- transition periods for adapting national statistical standards to international standards may be considerably long and it may be difficult to establish the exact stage of implementation of these standards at the national level.

269. Among the official statistics the following three types of resources can be distinguished –national, regional and international statistics.

(a) National statistics

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

National Accounts

271. The most valuable information is contained in the input-output tables (see Chapter 5.3.2.2.), which represent a framework for weighting and compilation of index numbers and have a central role in the production account and goods and services account of the national accounting framework.[175] The national accounts represent a major source for industry specific value added data, but also a source for information on employment and exports. They provide recent data in international standard form and are based on the methodology developed in the System of National Accounts (SNA) 1993, which will serve as the new standard for many years to come.[176] SNA offers a coherent, consistent and integrated set of macroeconomic accounts, balance sheets and tables based on a set of internationally-agreed concepts, definitions, classifications and accounting rules. It provides a comprehensive accounting framework within which economic data can be compiled and presented in a format that is designed for purposes of economic analysis, decision-taking and policy-making.[177] Practical guidance on the implementation of the SNA methodology can be found in the handbook of national accounting.[178]

Sector statistics

272. These publications provide particularly relevant information on value added, employment and foreign trade. They take the form of surveys, of industrial outlook or other products. Usually national statistical offices try to capture up-to -date tendencies in different sectors of industry, especially the new and fast-growing sectors. For example statistical offices in many countries have recently reviewed the industries related to software, the Internet, the computer market and other information industries and provide in depth information with updates. The information may include sector indexes, very recent data, correlation with other industries, positions of special groups or professions, etc. Cultural statistics publications and foreign trade statistics deserve special attention.[179]

Labor statistics

273. These statistics cover data on employment quite regularly by industry and in an internationally recognized format. The time intervals may differ across countries and regions, but in view of the social aspects of employment such statistics are generally detailed and easily available.

Bank statistics

274. Bank statistics offer very pertinent information on import and export as they contain detailed and regular data on a country's balance of payments.

Other sources

275. 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 statements statistics are available in the framework of activities undertaken or reported by the Ministry of Finance.

(b) Regional statistics

276. Another type of relevant statistical information is contained in regional statistical publications. They can provide the basis for regional comparisons and supply information on important indicators for the study. Examples of particularly developed regional statistics are produced by the European Communities, the OECD, Nordcom, sponsored by the Nordic Council of Ministers.

277. For 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. It contains disaggregated classes which could be very helpful in surveying the copyright-based industries.[180] The European System of Accounts is compatible with the ISIC. Statistics on the member states of the European Union are provided accordingly by the Statistical Office of the European Communities – Eurostat.[181] In North America the North American Industry Classification System (NAICS) is gradually being introduced, involving structural changes in the organization of statistics.[182]

(c) International organizations statistics

278. A third source of official statistics are the publications of international organizations.[183] Two aspects could be mentioned here:

- on the universal level the UN offers methodological standards on how national statistics shall be produced. Chapter 6 contains references to the System of National Accounts and the International Standard Industrial classifications (ISIC). Statistical values in official statistics are usually compiled and presented at the national level according to the ISIC classes;[184] and

- international organizations produce publications that provide a basis for international comparison. Unesco, for example, offers global and internationally comparable statistics on education, science, technology, culture and communication on an annual basis,[185] including statistics on trade in cultural goods.[186] The World Trade Organization (WTO) produces international trade statistics, focusing on merchandise and commercial services.[187] The United Nations statistical publications,[188] the World Bank and the International Monetary Fund (IMF) are also useful sources. However, these sources often can not provide direct and sufficiently disaggregated data.

7.1.2. Supplementary Statistics

279. Supplementary statistics most probably would have to be consulted, but as stated in Chapter 6 their use should be limited to the extent possible in view of the differences in methodology applied when compiling such data, its specific objectives, periodicity, time frame covered, etc. It has to be kept in mind that supplementary statistics are of an indicative character. The following supplementary sources have been identified – national professional organizations' statistics, specific industry sources and certain international statistics.

(a) National Professional Organizations' statistics

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

281. This information may sometimes represent the only source that would enable you to capture the activities of free-lancers and independent artists, composers and writers, especially with regard to people who exercise several professions, or do not appear separately in any statistics. The information is often organized in annual or special reports. It is a demanding task to collect it and inconsistencies with official sources can occur.

(b) Specific industry sources

282. Industry statistics provide often detailed information on foreign sales at wholesale level. It may also be useful in terms of adjusting the copyright factors in various fields, or supply additional information on global markets of specific copyright products. This information may be available from industry-wide or core-industry groupings.

283. Company statistics are another industry source of relevance for sectors where no other accurate information is available.

(c) Certain international statistics

284. International databases are available on a regional and universal basis. In Chapter 5.3.2.2. the Global Trade Analysis Project (GTAP) was mentioned. However the specific international database, appropriate for the country surveyed, should be identified individually. A number of international non-governmental organizations, especially the ones representing major stakeholders of copyright and related rights collect very relevant data. The problem often is that this statistics are reserved for their members, or for some other reason are not always easily made available. They do not follow necessarily international statistical standards but could have interesting levels of disaggregation.[189]

7.2. Limitations of Statistics

285. Also relevant for a survey is the issue of the limitations of statistics in terms of its scope and organization.

7.2.1. Limitations of Scope

(a) Limitations of the value added approach

Illegal activities

286. The value added approach can not capture illegal activities, the underground economy and the external effects (see also Chapter 5.3.2.1.). Consequently the value of goods and services that are not produced for sale as well as the production of pirated copies will not be reflected in the national statistics. Following this principle, the reported value added by the core copyright-based industries generally would not include the value or economic size of illegal activities. However, with respect to some of the non-core industries such as the retail and wholesale industries that sell both legitimate and illegal copyright works, some inclusion of the value of illegal activities will probably be included. For this reason, if a country with rampant piracy is analyzed, one should focus on the relatively low percentage of GDP taken up by that nation's core copyright-based industries instead of the higher relative percentage reported for the total copyright-based industries in that nation since the latter figure would have included both the core data and some arguably inflated copyright distribution figures. It may be rather difficult to separate those activities in processing data, but this limitation has to be borne in mind.

The market aspect

287. The value added approach would not measure the economic contribution of the copyright-based industries with regard to that part of the cultural production which is not marketable. Hence it would be difficult to compile statistics on such activities as crafts, which are often not reported in the national accounts.[190] In order to apply the value added approach for measuring the overall contribution of copyright one has to assume that the market approach is fully adopted as an economic principle in society.

The ownership aspect

288. A third limitation of the value added approach is that it can not tell us enough about the ownership aspect which is quite important from the copyright perspective. Subsequently it is not taken into account and not measured.[191] It has to be recognized that the ownership aspect is more of an element for the qualitative analysis whereas most surveys measure the overall quantitative contribution. Methods to establish the origin of a copyright product would need further refinement.

(b) Missing categories

289. 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 consolidated account statements of companies and those do not separate and report all copyright-related activities. As mentioned this problem could partially be addressed by sample analyses or by estimation methods. While the former consumes a lot of resources both in terms of time and money, the latter has problems with reliability.

290. Differences in national statistics exist and they are among the most important hindrances to international comparability. A better comparability is usually achieved in those sub-branches of activities that are traditionally considered "industrial," such as printing and publishing. Output, value added, number of employees and international trade have traditionally been considered to be important for industrial branches and thus found their way into the national statistics. This is not so with regard to new categories which have only recently appeared on the market. With the development of the copyright-based industries new products are created that are clearly based on copyright but are difficult to measure. Such an example is virtual education, which is not measured currently in view of recognized difficulties. With regard to these new or missing categories the survey could probably be limited to clearly stating which clusters of activities have been identified but not addressed in view of methodology development.

291. In cases of missing categories and data on them sometimes output measures have been compared from different sources so that the value added could be correctly calculated. In general using different types of statistics for obtaining figures on the same specific indicator should be avoided. Working with industry statistics may be inevitable in order to deal with gaps in official statistics.[192] However, industry association data should be treated with care as it may be based on a limited sample of for instance the top 20 firms in a specific sector.

(c) Conceptual limitations

292. The logic of statistics does not always follow the logic of copyright and sometimes those two are difficult to reconcile. An example is the balance of payment statistics. This information may not capture the magnitude of the copyright-based exports. The balance of payment data shows royalty flows, but those are not disaggregated by industry in the case of company to company transfers. So there are figures that appear to be financial transfers that are not specific to a given industry. Instead of trying to estimate how much of those financial flows relate to the copyright-based industries in Chapter 6, we have recommended adopting the foreign sales approach. The whole idea of export/import implies that a good flows across the border and money flows back and that generally is not how the copyright-based industries function. They work more closely in terms of the idea of a license which is given to the

manufacturer in the foreign country who manufactures copies of the computer software or copies of the CD and the financial return goes back to the country as those CDs are sold on the market (if subsidiaries are involved there is no return of the cash at all). A financial or accounting consolidation occurs for a company that has operations all around the world and the only time that money comes together is when investors look at the accounting data. This example is illustrative in terms of difficulties you may face in any analysis based on limited sources.

7.2.2. Limitations of the Organization of Statistics

(a) Management of data

293. In many cases, data is available but is not published or may be available on searchable databases. Data gathering in national statistics offices tends to be organized around types of businesses and industries. As copyright crosses industries, not all data is available from single departments in statistics bureaus. In a number of cases separate divisions in the statistical office may not be fully aware of the information being gathered at other units in the office and multiple contacts in the agencies entrusted with the collection and processing of statistical data may be very helpful.

(b) Accounting rules and practices

294. Specific problems stem from accounting rules and practices. Often the import and export figures are based on the actual physical tracking of goods through customs and make sense mostly when you deal with physical goods. But if an export is not physical then it would be entered in the country where the financial transfer occurred and national accounting statistics would capture it in the country where it becomes taxable. Accounting rules and practices must be studied for the purpose of correct interpretation of statistical data.

295. Specific industry sources are often differently organized as compared to official statistics. For example in some countries, the reported book export statistics would not capture a book export if it is not organized as a shipment of 2000 books or more. So if there is a shipment of less than 2000 books this shipment will not necessarily be recorded as a book shipment. This would require the establishment of an appropriate factor.

(c) Industry organization

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

297. 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 the statistical treatment becomes more refined. This will affect the results of the surveys for the different groups, but is not likely to affect the overall copyright-based contribution.

(d) Adjustments

298. The organization and scope of statistics will imply inevitable adjustments, such as equating the periodicity of the analysis with regard to the specific indicators, the selection of output measures and the use of outdated information. Sometimes a choice has to be made between less recent and more disaggregated and more up-to date and less detailed information.[193] The adjustments that are based on interviews should take into account the fact that people may consider it sensitive to provide exact information, which may be related to the mode of payment, reporting for tax avoidance purposes, etc. That is why the construction of estimated data should be as transparent as possible and take into consideration such underestimates to the extent possible.

(e) Double counting

299. A specific case where adjustments are crucial is the avoidance of double counting. As mentioned, some of the 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 director is accounted for in the employment statistics but it is actually paid by the film industry, it would appear under the film industry and it should not be added to the value added elsewhere. A general point that could be made here is that revenues are accounted for in the country where they have been received and entered in the national accounts. That has to be borne in mind at a stage when international comparisons are made.

7.3. Future Trends

300. The following major trends are observed that could improve the means for measuring copyright-based industries and provide some additional solutions to the problem of availability and structure of statistical data.

7.3.1. Refining the Methodology for Measuring Intangible Assets

301. Measurements of intangible assets are not sufficiently developed at national and international levels. Work is going on in this field in bodies such as the UN Statistical Commission and the OECD. Of particular relevance are the activities of the so-called Canberra Group II.[194]

302. In 2001 at its annual meeting, the United Nations Statistical Commission asked the Inter-Secretariat Working Group on National Accounts (ISWGNA) to investigate the issue of intangible assets. The Organization for Economic Cooperation and Development (OECD) has taken the lead in this work. Subsequently a specific group was set up by the UN Statistical Commission which received the name "the Canberra Group on the measurement of non-financial assets (Canberra Group II)."[195]

303. The Canberra group draws a distinction between:

- produced assets – outputs from production processes, used in production (as fixed assets or inventories) or as stores of value (valuables); and
- non-produced assets – natural resources or legal (or accounting) constructs[196] such as patented entities.[197]

304. The Group considers issues related to fixed assets (tangible and non-tangible) and non-produced assets (tangible and non-tangible) as indicated in Table 7.1.

Table 7.1. Financial and Non-Financial Assets[198]

<table>
<tr><td rowspan="5">Non-financial assets</td><td rowspan="3">Produced assets</td><td rowspan="2">Fixed assets</td><td>Tangible fixed assets</td></tr>
<tr><td>Intangible fixed assets</td></tr>
<tr><td colspan="2">Inventories</td></tr>
<tr><td colspan="2">Valuables</td></tr>
<tr><td>Non-produced assets</td><td colspan="2">Tangible non-produced assets</td></tr>
<tr><td colspan="3">Financial assets</td><td>Intangible non-produced assets</td></tr>
</table>

305. A number of copyright-based activities that comprise the subject of a survey could be classified among the indicated categories and in particular within the intangible non-produced and intangible fixed assets.

(a) Intangible non-produced assets

306. With regard to intangible non-produced assets, the Canberra Group will review conceptual issues related to the four categories identified in SNA93 – patented entities, leases and other transferable contracts, purchased goodwill, other intangible non-produced assets. Ongoing work indicates that new and more precise classification for those may be proposed,[199] as well as new approaches to the open questions related to their depreciation. With regard to some of the issues 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 recognize currently such important assets as brand names, trademarks, knowledge capital and goodwill. But the accumulation of these important assets is not cost free to business – a proportion of expenses relating to advertising, training and customer service are related to the building up of these assets and could be considered as partly capital in nature.[200]

(b) Intangible fixed assets

307. SNA 1993 has introduced three new items to the set of statistics known as produced assets: mineral exploitation, computer software and entertainment, literary or artistic originals. Licenses and legal constructs are often used in conjunction with intangible assets. It is not clear whether licenses themselves can not constitute an intangible asset or whether they can be dissociated from the underlying asset. For software, a recommendation is being discussed that software be broken down into originals and reproductions, the latter to include licenses.

308. An economic specificity related to software is the difficulty of drawing the line between rental and sale in view of the very low cost of reproduction. In this case there is no need for a specific rental industry for software, unlike the case of tangible assets. Another difficulty is related to the fact that the difference between payment for multiple year licenses (treated as investment) and payment for annual licenses, often called royalties (treated as intermediate consumption) is reduced more or less to a difference in the mode of payment.

309. With regard to entertainment, literary or artistic originals, some of the practical difficulties are related to estimating the expected future income stream for artistic originals.

310. The Canberra Group II may also consider the treatment of databases, including recommendations that have been made to that end in the report of the OECD task force on computer software.

311. The reports of the Canberra Group II on updating the national accounts are submitted regularly for review to the ISWGNA. The result of its work may be an improvement of the available measurements for the contribution of some of the copyright-based industries. However, it has to be noted that work on refining theory has to be supported by parallel research that obtains more and better empirical information.

7.3.2. Convergence of Classifications

312. 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.[202] Convergence scenarios are being developed on the future convergence between NACE (the General Industrial Classification of Economic Activities) and NAICS (the North American Industry Classification System). With the remaining difficulties, notably in definitions, what is aimed at this stage is a convergence on a higher level of grouping.[203] The "Arts, Entertainment and Recreation Activities" grouping has been recognized as particularly difficult, as well as some other groupings in the category of services. Reports are regularly produced since the launching of this work in 2000.[204]

7.3.3. Developing Satellite Accounts

313. Chapter 5 highlighted that the development of satellite accounts for copyright (or intellectual property in general) statistics would be very useful and would substantially facilitate the collection of relevant statistics for the survey. Such accounts should apply similar techniques that are based on consistent information. The collection of new data on the copyright-based industries is a cooperative task that should be undertaken at the international level.

ANNEX I

List of the Copyright-Based Industries

Type of Copyright Industry	Main Groups of Industries	Subgroups
Core Copyright	Press and Literature	Authors, writers, translators; Newspapers; News and feature agencies; Magazines/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 (book stores, newsstands, 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 and Databases	Programming, development and design, manufacturing; Wholesale and retail prepackaged 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	
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)

(table continued on next page)

List of the Copyright-Based Industries

Type of Copyright Industry	Main Groups of Industries	Subgroups
	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 retailing General transportation Telephony and Internet	

ANNEX II

United Nations Industry Classification Codes corresponding to the Copyright-based Industries

1. Core Copyright Industries

Press and Literature

Economic Activity	ISIC Rev.3.1. code	Description
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/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

Economic Activity	ISIC Rev.3.1. code	Description
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

Economic Activity	ISIC Rev.3.1. code	Description
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

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

Copyright Collecting Societies

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

2. Interdependent Copyright Industries

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

3. Partial Copyright Industries

Economic Activity	ISIC Rev.3.1. code	Description
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

Non-dedicated Support Industries

Economic Activity	ISIC Rev.3.1. code	Description
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
	61	Division: 61 - Water transport
	62	Division: 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
		Group: 641 - Post and courier activities
		This Group is divided into the following Classes:
		6411 - National post activities
	641	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

European Classification Codes, Corresponding to some of the Copyright-Based Industries[205]

	NACE Category, Rev.1.1.	CPA 2002	PRODCOM
Press and Literature			
Authors, writers, translators			
Newspapers	189, 22.12		
News and feature agencies, etc.	1221, 92.40		
Magazines and periodicals	190, 22.13		
Books, maps	188, 22.11		
Other publishing (cards, directories, etc.)	192, 22.15		
Pre-press, printing, and post press of published materials	194, 22.21; 195, 22.22; 196, 22.23; 197, 22.24; 198, 22.25		
Wholesale and retail of press and literature		51.47.21; 52.47	
Libraries	1223, 92.51		
Music, Theatrical Productions, Opera			
Composers, lyricists, arrangers, choreographers, directors, performers, etc.			
Printing and publishing of music	191, 22.14		
Reproduction of recorded music	200, 22.31		
Whole and retail trade of recorded music		51.43.22; 52.45.22	
Artistic and literary creation and interpretation	1216, 92.31		
Performances and allied agencies (booking agencies, ticket agencies, etc)	1217, 92.32		
Film and Video			
Writers, directors, actors, etc.			
Motion picture and video production	1210, 92.11		
Motion picture and video distribution	1211, 92.12		
Motion picture exhibition	1212, 92.13		
Video rentals and sales		71.40.12; 51.43.22; 52.45.22	
Allied services	22.3		
Photography			
Photographic Services, Studios, etc.		74.81	
Visual and Graphic Arts			
Artists			
Art galleries and other wholesale and retail		52.48.37	
Graphic design			22.25.10.00
Radio and Television			
Radio and television activities	1214, 92.20		
Transmission via cable and satellite networks	64.2		
Software and Databases			
Programming, development, and design	1113, 72.21		
Wholesale and retail		51.84.10	
Databases and processing	1116, 72.30		
Database publishing	1118, 72.40		
Advertising			
Agencies, buying services	1140, 74.40		
TV sets, radio sets, VCR, CD, Cassettes, and other equipment			
Manufacture	390, 32.30		32.30.32.90
Wholesale and retail		51.43.21; 52.45.21	
Computers and Equipment			
Manufacture	369, 30.02		
Wholesale and retail		51.84.10	
Musical Instruments			
Manufacture	853, 36.30		
Wholesale and retail		51.47.31; 52.45.23	
Photographic and cinematographic instruments			
Manufacture	399, 33.40		
Wholesale and retail		51.47.32; 52.48.14	

ANNEX IV

Checklist of Items to be Addressed when Undertaking a Sample Analysis[206]

MAIN INDICATORS	ADDITIONAL INFORMATION
(1) COMPANY INFORMATION[207]	
– Field and type of activities	– General supply and demand conditions, relations with other industries.
– Products/services[208]	– Market share
(2) SIZE OF THE COMPANY	
– Number of people employed - persons in full-time equivalents.	– Number of jobs, payroll, total hours worked.
(3) FINANCIAL INFORMATION	
– Total revenues	– Outputs (physical output and sales on annual basis); – Operating profit; – Other income; – Cash flows.
– Total expenses (separated for material and production costs and sales and general administration expenses)	– Services and production costs; – Sales and general administrative expenses - salaries, marketing, transportation, rental, storage, maintenance, welfare expenses (pensions, social security contributions, etc.), capital consumption, depreciation costs, taxes on production, subsidies on production, etc.
– Value of exports.	
(4) ESTIMATE OF COPYRIGHT-BASED ACTIVITY	
– Share of sales depending on copyright; – Share of exports/imports depending on copyright.	– Physical trade in copyright goods and services and royalty flows; – Number of people employed in creative activities; – Organizational structure assigned to creative activities; – Proportion of working time dedicated to creative activities; – Resources spent on copyright payments, royalties, fees, other services, etc.; – Importance of the IP for the activity and the performance of the company.

GLOSSARY

adaptation; right of – the act of altering a pre-existing *work* (either protected or in the public domain) or an expression of folklore, for a purpose other than that for which it originally served, in a way that a new *work* comes into being in which the elements of the pre-existing work and the new elements – added as a result of the alteration – merge together. *Right of adaptation* is a shortened reference to the right provided for under Article 12 of the Berne Convention under which *authors* must enjoy the *exclusive right* of authorizing adaptations, arrangements and other alterations of their *works*.

artists – workers, creators and *performers*, who produce art.

asset – a physical property or intangible right that has economic value; in statistical terms *assets* are entities that must be owned by some unit, or units, and from which economic benefits are derived by their owner(s) by holding or using them over a period of time.

author – the creator of a *work*. In general, a physical person – the intellectual creator of the *work*. Some national laws, however, also recognize the authorship of legal entities – such as employers, producers, etc. – who take the initiative and responsibility for the creation of the *work*. Under Article 2(6) of the Berne Convention, the protection of *works* "shall operate for the benefit of the *author* and his successors in title."

authors' rights – rights granted to *authors* in respect of their *works*. *Authors* have two kinds of rights: *economic rights* and moral rights. The expression "authors' rights" is used frequently as a synonym of *copyright*. In certain countries following the common law tradition, however, *copyright* has a narrower meaning; it only covers *economic rights*.

balance of payments – a statistical statement that systematically summarizes, for a specific time period, the economic *transactions* of an economy with the rest of the world.

balance sheet – a statement of a firm's financial position as of a given date, listing *assets* in one column, liabilities plus net worth in the other. Each item is listed at its actual or estimated money value. Totals of the two columns must balance because net worth is defined as assets minus liabilities.

basic price – the amount receivable by the producer from the purchaser for a unit of a good or service produced as *output* minus any tax payable, and plus any subsidy receivable, on that unit as a consequence of its production or sale; it excludes any transport charges invoiced separately by the producer.

black market sales – illegal *transactions* above the regulated price.

broadcasting; right of – "broadcasting" is communication of a *work* or an object of *related rights* to the public by wireless transmission. It covers both terrestrial broadcasting and satellite broadcasting. "Broadcasting" is not to be understood as including interactive "making available" of *works* and objects of *related rights* over computer networks.

capital goods (capital) – durable produced *goods* that are in turn used in production. The major components of capital are equipment, structures and inventory. In accounting and finance, "capital" means the total amount of money subscribed by the shareholder-owners of a corporation, in return for which they receive shares of the company's stock.

capitalized value – the present value of an *asset's* future income stream.

collecting organization/society – in a broader sense, a synonym of "collective management organization" or "authors' society." In that sense, it is a kind of misnomer, since collecting remuneration is only one of the tasks of such organizations; in particular, distributing remuneration and transmitting it to the *owners of rights* represented by the organization is, at least, as much important a task. In a narrower sense, an organization performing only the task of collecting remuneration, which is then transferred to collective management organizations and/or to other joint management organizations for distribution to the owners of rights.

communication to the public, right of – in a narrower sense it means the transmission, by wire or without wire, of the images or sounds, or both, of a work or of an object of *related rights*, making it possible for the images and/or sounds to be perceived by persons outside the normal circle of a family and the closest social acquaintances of the family, at a place or places the distance of which from the place where the transmission is started is such that, without the transmission, the images or sounds, or both, would not be perceivable at the said place or places, irrespective of whether the said persons can perceive the images and/or sounds at the same place and at the same time, or at different places and at different times. The Berne Convention provides for such a right of communication to the public in respect of *public performances* of dramatic, dramatico-musical and musical *works*, public recitations of literary *works*, and audiovisual *works*. The WCT adopted this concept, but it also extended it by referring to (interactive) "making available to the public" as being also covered by it.

compensation of employees – the total remuneration, in cash or in kind, payable by an enterprise to an employee in return for work done by the latter during the accounting period. It does not include any taxes payable by an employer on the wage and salary bill, which are treated as *taxes on production*. Compensation of employees has two main components: (a) wages and salaries payable in cash or in kind; (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.

consumer durables – durable *goods* acquired by households for final *consumption* (i.e., those that are not used by households as stores of value or by unincorporated enterprises owned by households for purposes of production); they may be used for purposes of *consumption* repeatedly or continuously over a period of a year or more.

consumption – in macroeconomics, the total spending, by individuals or a nation, on consumer *goods* during a given period; in statistics consumption is an activity in which institutional units use up *goods* or *services*; consumption can be either intermediate or final.

consumption demand – the value of commodities and of *services* that households as a group are able and willing to buy in a period.

consumption expenditures include expenditure on all goods and services produced and sold to their final users during the year.

consumption of fixed capital – 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.

copyright – the rights in literary and artistic *works*. In countries following the common-law tradition, it is frequently used both in a narrower sense and in a broader sense. In a narrower sense, it means economic rights (and, since the TRIPS Agreement does not cover moral rights, under it, this term is necessarily applied with such a narrower sense); and, in a broader sense, it means, in addition the rights in literary and artistic *works*, but also, for example, the rights of producers of phonograms, the rights of broadcasting organizations and, under certain *copyright laws*, the rights in typographical arrangements of published editions.

copyright factor – percentage indicating the portion of a particular activity/industry that can be attributed to copyright-based activities; also level of dependence on *copyright* material; sometimes referred to as *weighting*.

copyright holder – a synonym of *owner of copyright*.

copyright law – the norms on the acquisition, protection, exercise and enforcement of *copyright* and *related rights*. In a narrower sense it only means the norms on the acquisition, protection, exercise and enforcement of *copyright*.

copyright-based industries – activities or industries where *copyright* plays an identifiable role.

core copyright industries – industries that are wholly engaged in creation, production and manufacturing, performance, broadcast, communication and exhibition, or distribution and sales of *works* and other protected subject matter.

cost – a disadvantage associated with an act of choice; an *opportunity cost*.

creative industries – industries that include the *cultural industries* plus all cultural or artistic production, whether live or produced as an individual unit. The creative industries are those in which the product or service contains a substantial element of artistic or creative endeavor.

cultural economics – a discipline that studies the interaction of cultural and economic value and its effect on the *creative industries*. It analyzes the significance of *cultural goods* and *services* to the development of society, their qualities and other characteristics, incl. government policies in this regard; the *cost* benefit expression of the underlying opposing interests in *copyright*; the use of *cultural goods* by consumers, consumer habits, etc. It is defined also as the application of economic theory and research methods to the arts, heritage and *cultural industries*.

cultural goods – consumer *goods* that convey ideas, symbols, and ways of life. They inform or entertain, contribute to build 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.

cultural industries – industries which produce products that have culturally significant content that is reproduced on an industrial scale. It is generally agreed that this term applies to those industries that combine the creation, production and commercialization of contents, which are intangible and cultural in nature. These contents are typically protected by *copyright* and they can take the form of *goods* or *services*.

cultural products – a term used to identify the combination of *cultural goods* and *cultural services*.

cultural services – activities aimed at satisfying cultural interests or needs. Such activities do not represent material *goods* in themselves: they typically consist of the overall set of measures and supporting facilities for cultural practices that government, private and semi-public institutions or companies make available to the community. Examples of such *services* include the promotion of performances and cultural events as well as cultural information and preservation. *Cultural services* may be offered for free or on a commercial basis.

depreciation (of an asset) – a decline in the value of an *asset*. In both business and national accounts, depreciation is the monetary estimate of the extent to which *capital* has been "used up" or worn out over the period in question. Sometimes in national income accounting it is referred to as *capital consumption* allowance.

direct taxes – taxes levied on income, such as corporate income taxes and individual income taxes.

discounting – the process of converting future income into an equivalent present value. This process takes a future currency amount and reduces it by discount factor that reflects the appropriate interest rate.

distribution; right of – under the first basic meaning of the term "distribution," it relates to *copyright* and *related rights*. In the broader sense, it is the making available of the original or copies of a *work* or an object of *related rights* to the public (i) by sale or other transfer of ownership, or (ii) by rental, lending or other transfer of possession. In a narrower sense, it is the making available of the original or copies of a work or an object of *related rights* to the public by sale or other transfer of ownership.

distributive efficiency (also allocative efficiency) – a situation in which no reorganization or trade could raise the utility or satisfaction of one individual without lowering the utility or satisfaction of another individual. Also called Pareto efficiency. It requires production of the maximum amount of economic surplus out of the inputs of labor, land and other resources.

economic assets – entities over which ownership rights are enforced by institutional units, individually or collectively, and from which economic benefits may be derived by their owners by holding them, or using them, over a period of time.

economic rights – the *exclusive rights* of *owners of copyright* and *related rights*, to authorize certain acts in respect of their *works* or objects of *related rights* (in certain cases – for example, in the case of the rights of *performers* – to prevent such acts to be carried out without the consent of the *owner of the rights*) or, at least, their rights to remuneration for such acts. The term is mainly used in order to differentiate these rights from another, separate sets of rights, namely from moral rights. Therefore, its use is necessary first of all in respect of those *owners of copyright* and *related rights* – namely, *authors* and *performers* – who normally have moral rights.

elasticity – an exact measure of responsiveness of quantity demanded or quantity supplied to changes in other variables; the percentage change in quantity divided by the percentage change in whatever variable causes the quantity change – all other things being equal.

exclusive right – a right that is enjoyed by the *owner of copyright* or *related rights*, excluding the acquisition and enjoyment of the same right in respect of the same work or object of *related rights* by anyone else, on the basis of which the owner of right – and nobody else – may perform a certain act and may authorize or prohibit the performance of

that act by others. Several exclusive rights may exist in parallel with respect to the same product. For example, in the case of a phonogram, the authors of the musical *works* performed, the *performers* of those *works* and the producer of the phonogram may all enjoy exclusive rights (such as the *right of reproduction*). This does not deny the exclusivity of these parallel rights since the objects of these rights are not the same.

expenditure approach – an approach for measuring *GDP*, whereby *GDP* is viewed as the sum of all expenditure categories – personal *consumption*, gross private domestic investment, government purchases at purchasers' prices, less the f.o.b. value of imports of *goods* and *services*.

externalities – direct effects that the actions of some consumers or producers have on the utility of other consumers or on the *output* of other producers, none of whom have invited these effects. Externalities exist when private *costs* or benefits do not equal social *costs* or benefits. They represent changes in the condition or circumstances of institutional units caused by the economic actions of other units without the consent of the former.

fair dealing – under various *copyright laws* following the common-law tradition, fair dealing is a general basis for applying exception to *copyright* and *related rights*. It is understood as meaning certain specific acts not conflicting with a normal exploitation of *works* and objects of *related rights* and not unreasonably prejudicing the legitimate interests of *owners of rights*. In at least one country, a similar general exception provides for, and is known as, *fair use*.

fair use – in the *copyright law* of at least one country, fair use, in addition to special exceptions, constitutes a general exception to *copyright*. Fair use is allowed for purposes such as criticism, comment, news reporting, teaching, scholarship or research. It is to be determined by considering the following factors: (i) the purpose and character of the use, including whether the use is of a commercial nature or is for non-profit educational purposes; (ii) the nature of the *work* protected by *copyright*; (iii) the size and substantiality of the portion used in relation to the *work* as a whole; and (iv) the effect of the use upon the potential *market* for, or value of; the *work*.

final products are *goods* that are not, in the period under considerations, used as inputs by other firms.

financial account – a system of records of the net acquisition of financial *assets* and net incurrence of liabilities for all institutional sectors by type of financial *asset*.

fixed assets – tangible or intangible *assets* produced as *outputs* from processes of production that are themselves used repeatedly or continuously in other processes of production for more than one year.

fixed cost – the monetary value of fixed inputs used in a period. The fixed *cost* is the cost that a firm would incur even if its *output* for the period in question were zero. Total fixed cost is made up of such individual contractual *cost* as interest payments, mortgage payments, and directors' fees.

goods – physical objects for which a demand exists, over which ownership rights can be established and whose ownership can be transferred from one institutional unit to another by engaging in *transactions* on *markets*.

gross domestic product (GDP) – the sum of the *market values* of all final *goods* produced during a period by the resources located on the country's territory, regardless of who owns these resources.

gross national product (GNP) – the sum of the *market values* of all final *goods* produced during a period from resources owned by a country.

gross value added (GVA) – the value of gross *outputs* less the value of inputs from other industries (*intermediate consumption*); it is a measure of the contribution to *GDP* made by an individual producer, industry or sector.

illegal production – the production of *goods* or *services* whose sale, distribution or possession is forbidden by law; and production activities which are usually legal but which become illegal when carried out by unauthorized producers.

income approach – an approach for measuring *GDP* whereby *GDP* is the sum total of the factor incomes that are generated in the process of producing final *output – compensation of employees*, plus taxes less *subsidies* on production and imports, plus gross *mixed income*, plus gross *operating surplus*.

indirect taxes – taxes that can be passed on, in whole or in part, to other institutional units by increasing the prices of the *goods* or *services* sold.

infringement of copyright or related rights – an act carried out in respect of a *work* protected by *copyright* or an object of *related rights* without authorization of the *owner of copyright* or *related rights* concerned where such authorization is required by *copyright* norms.

input–output tables – tables that list the flows of all newly produced *goods* and of resource *services* between all their suppliers and recipients and, thus, illustrate the web of interrelationships in the economy. They represent a 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.
The input-output technique allows studying the quantitative interdependence of sectors. It has been developed first in the 1930s by Wassily W. Leontief and today input-output tables are published by most countries at regular intervals.

intangible fixed assets – non-financial produced *fixed assets* that consist of mineral exploration, computer software, entertainment, literary or artistic originals and other intangible fixed assets intended to be used for more than one year.

intangible non-produced assets – *assets* that entitle their owners to engage in certain specific activities or to produce certain specific *goods* or *services* and to exclude other institutional units from doing so except with the permission of the owner.

interdependent copyright industries are industries that are engaged in production, manufacture and sale of equipment whose function is wholly or primarily to facilitate the creation, production or use of *works* and other protected subject matter.

intermediate consumption – 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*.

intermediate goods – *goods* produced by national producers during a given year and then used up in the making of other goods by the same or other national producers in the same year.

intermediate products are *outputs* of some firms that are inputs for other firms.

International Standard Industrial Classification (ISIC) – a United Nations' classification of economic activities arranged so that entities can be classified according to the activity they carry out. 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 and divisions, the successively broader levels of classification, combine the statistical units according to the character, technology, organization and financing of production.

liability – an obligation which requires one unit (the debtor) to make a payment or a series of payments to the other unit (the creditor) in certain circumstances specified in a contract between them.

marginal cost – the change in an activity's total benefit which is attributable to a unit change in the level of that activity.

market – a framework within which owners of *property rights* make contact with one another for the purpose of transferring ownership, usually for money.

market economy – an economic system in which the what, how and for whom questions concerning resource allocation are primarily determined by supply and demand in *markets*. In this form of economic organization, firms, motivated by the desire to maximize *profits*, buy inputs and produce and sell *outputs*. Households, armed with their factor incomes, go to *markets* and determine the demand for commodities. The interaction of firms' supply and households' demand then determines the prices and quantities of *goods*.

market failure – a shortcoming of the *market economy* that prevents an efficient allocation of resources, including inequity and instability. In the context of *the Guide* market failure is understood as the inability of the *market* to create sufficient compensation for the production of *cultural products*.

market value – price established by demand and supply.

media economics – a discipline that studies how economic and financial pressures affect a variety of communications activities, systems, and organizations and enterprises, including media and telecommunications. Research in media economics overlaps portions of the *cultural economics* field that are concerned with motion pictures, audio recordings, and broadcasting.

monopoly – a *market* structure in which a commodity is supplied by a single firm, the entry of other sellers in the *market* is severely restricted or even impossible and where no good substitutes are available for the item sold.

neighboring rights – a synonym of *related rights*.

net value added – the value of *output* less the values of both *intermediate consumption* and *consumption of fixed capital*.

non-dedicated support industries are industries in which a portion of the activities is related to facilitating broadcast, communication, distribution or sales of *works* and other protected subject matter, and whose activities have not been included in the *core copyright industries*.

non-produced assets – non-financial *assets* that come into existence other than through processes of production.

operating surplus/mixed income – the surplus or deficit accruing from production before taking account 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.

opportunity cost – the most fundamental of all concepts of *cost*: equal to the most highly valued alternative that is forgone in an act of choice.

output approach (or production approach) – an approach for measuring *GDP* from its production side whereby *GDP* is viewed as the difference between *output* and *intermediate consumption*, i.e., the sum of *value added* of all industries, firms or establishments. Output-based *GDP* is the sum of the gross values added of all resident producers at producers' prices, plus taxes less subsides on imports, plus all non-deductible VAT (or similar taxes).

output consists of those *goods* or *services* that are produced within an establishment that become available for use outside that establishment. 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.

owner of copyright – The physical person to whom, or the legal entity to which, the *copyright* in a *work* belongs. Except for a few special cases under certain *copyright laws*, the original owner of *copyright* is the *author* in whom *copyright* is vested by operation of law upon his creation of the *work*. Certain *copyright laws* grant original ownership of *copyright* to a person other than the *author* or to a legal entity (such as the producer of an audiovisual *work*, the publisher of a collective work or the employer of the *author*). Owners of *copyright* may also be the heirs of the *authors*, or other persons who were the original owners of *copyright*, through inheritance, or the legal entities which become legal successors to those legal entities which were the original owners of *copyright*. The overwhelming majority of *copyright laws* allow assignment (transfer) of *copyright*, in whole or in part, as a result of which the assignee (transferee) becomes the owner of *copyright*.

partial copyright industries are industries in which a portion of the activities is related to *works* and other protected subject matter and may involve creation, production and manufacturing, performance, broadcast, communication and exhibition or distribution and sales.

performers – "actors, singers, musicians, dancers, and other persons who act, sing, deliver, declaim, play in, interpret, or otherwise perform literary or artistic *works* or expressions of folklore," Article 2(a) of the WPPT. The Rome Convention contains a similar definition in its Article 3(a). It is narrower since it does not extend to the performers of expressions of folklore. At the same time, the concept of "performer" is broader under the Rome Convention in the sense that Article 9 of the Convention provides for the possibility of extending it to variety and circus *artists*.

performing a work; right of public performance – performing a *work* means the act of a performer concerning a *work* as a result of which the *work* becomes audible and/or visible for those who are present at the place of the performance. Furthermore, it also means the making audible or visible of an audiovisual *work* or a work embodied in a phonogram through appropriate equipment. Under Article 11(1) of the Berne Convention, *owners of copyright* must have the *exclusive right* of authorizing public performance of their dramatic, dramatico-musical and musical works. The provision clarifies that the concept of such public performance extends to "public performance by any means or process," which means that the public performance of such *works* fixed in audiovisual fixations or in phonograms is also covered.

piracy – reproducing a *work* or object of *related rights* for *distribution*, as well as *broadcasting*, or cable transmission thereof, without authorization and usually for commercial purposes. The expression also extends to rebroadcasting or cable distribution of a broadcast without authorization and usually for commercial purposes. "Bootlegging" is a specific piratical activity.

pirated goods – goods embodying *works* and/or objects of *related rights* made through *piracy*. The TRIPS Agreement, in a footnote to its Article 51 provides a specific definition of "pirated *copyright* goods" which "mean any *goods* which are *copies* made without the consent of the right holder or person duly authorized by the right holder in the country of production and which are made directly or indirectly from an article where the making of that copy would have constituted an *infringement* of a *copyright* or a *related right* under the law of the country of importation."

primary market – a *market* in which newly produced *goods* or *services* are first traded. The primary market of the copyright-based industries usually cover sales of consumer goods e.g., CDs.

profit – the difference between *revenue* and *cost*.

property rights – rights that define the ability of individuals or firms to own, buy, sell, and use the *capital goods* and other property in a *market economy*.

public good – a commodity whose benefits are indivisibly spread among the entire community, whether or not particular individuals desire to consume the public good. Public goods generate positive *externalities* and provide nonexcludable and nonrival benefits to all members of society.

purchaser's price – is the amount paid by the purchaser, excluding any deductible VAT or similar deductible tax, in order to take delivery of a unit of a good or service at the time and place required by the purchaser; the purchaser's price of a good includes any transport charges paid separately by the purchaser to take delivery at the required time and place.

related rights – in the traditional sense, the term "related rights" means the rights of *performers* in respect of their performances, the rights of producers of phonograms in respect of their phonograms, and the rights of broadcasting organizations in respect of their broadcasts. The broader meaning of the expression extends also to the rights of publishers in the typographical arrangements of their published editions and of the *sui generis* rights of makers of databases.

rental; right of – the transfer of the possession of a copy of a *work* or an object of *related rights* for a limited period of time and for direct or indirect economic or commercial advantage. The Berne Convention and the Rome Convention do not provide for a right of rental, while the TRIPS Agreement does in respect of computer programs, audiovisual *works* and phonograms. The obligation of granting a rental right is the same under the WCT and the WPPT as under the TRIPS Agreement. In general, rental is regarded to be covered by a broader concept of distribution, and in certain countries, a general right of distribution extends to it.

reproduction, right of – "reproduction" is a [new] fixation of the *work* or object of *related rights* sufficiently stable in a way that the *work* or object of *related rights* may be perceived, [further] reproduced and communicated on the basis thereof. Storage of *works* in an electronic (computer) memory is also reproduction. Article 9(1) of the Berne Convention provides that owners of *copyright* must enjoy an *exclusive right* to authorize the reproduction of their *works* "in any manner or form."

revenue – market price times quantity, or sales.

royalty – compensation for the use of property, usually copyrighted material, expressed as a percentage of receipts from using the property or as an account per unit produced. A payment which is made to an *author* by an assignee, licensee or *copyright holder* in respect of each copy of his *work* which is sold.

satellite accounts – a framework to accommodate elements which are included in the central accounts, explicitly or implicitly, plus complementary elements (either monetary or in physical quantities) and possibly alternative concepts and presentations.

secondary market – a market where previously produced *goods* and *services* are traded. The secondary market for copyright-based industries are markets where copyright goods are used in other settings – public performance of sound recordings and films, photocopying of printed material and images, etc.

services – *outputs* produced to order, typically consisting of changes in the conditions of the consuming units realized by the activities of producers at the demand of the consumers; by the time their production is completed they must have been provided to the consumers.

spillover effects – same as *externalities*.

subsidies are current unrequited payments that 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.

tariff – a tax on imported *goods*.

taxes on production – 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 *compensation of employees* paid.

taxes on products – taxes on *goods* and *services* that become payable as a result of the production, sale, transfer, leasing or delivery of those *goods* or *services*, or as a result of their use for own *consumption* or own *capital* formation.

transaction – an economic flow that is an interaction between institutional units by mutual agreement or an action within an institutional unit that it is analytically useful to treat like a transaction, often because the unit is operating in two different capacities.

transaction cost – the *costs* of negotiating and carrying out voluntary legal agreements, for example, the resources used to bring buyers and sellers together and to facilitate the coordination of people's specialized activities through voluntary *market* exchanges; alternatively, the forgone *output* these resources might have produced.

translation; right of – translation is generally considered to mean the transformation of a text written or spoken in one language into another language. Sometimes, the concept is extended also to the transformation of a computer program from one programming language into another one. Under Article 8 of the Berne Convention, owners of *copyright* must be granted an *exclusive right* to authorize the translation of their *works*.

user of a work or object of related rights – in a narrower sense, a physical person who, or legal entity which, performs an act covered by *economic rights* under *copyright* or *related rights*. In a broader sense, anyone who performs an act of using a *work* or object of *related rights* in any manner or form, including using a lawful copy by its owner, such as reading a book, listening to a phonogram, or watching an audiovisual work.

value added – the difference between the value of *goods* produced and the *cost* of materials and supplies used in producing them. Generally value added consists of the wages, interest, and *profit* components added to an *output* by a firm or industry.

value added approach – an approach for measuring *GDP* whereby *GDP* is calculated as a sum of the exact *value added* by each firm to the *output* taken over from other firms.

variable cost – the monetary value of variable inputs used in a period.

weighting – see *copyright factor*.

works – works eligible for *copyright* protection are as a rule all original intellectual creations whatever may be the mode or form of expression. The expression "literary and artistic works" is to be understood as a single legal-technical expression. In the case of a given work it is, in general, not necessary to determine whether it may be regarded as a "literary work" or an "artistic work." It means all original intellectual creations irrespective of whether they may be regarded to belong to the literary domain, to the artistic domain or to both at the same time.

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FOOTNOTES

1 At *http://www.wipo.int/about-wipo/en/dgo/dgki_2002*.

2 The Glossary is built on the direct and indirect use of resources indicated in various parts of the Guide, on WIPO's own research, as well as on the forthcoming "WIPO Guide to International Copyright and Related Rights Treaties" prepared by Mihály Ficsor.

3 See Herman Cohen JEHORAM, "*Critical Reflections on the Economic Importance of Copyright*," 20 IIC 485(1989).

4 China, Spain, Austria, Eastern Europe, etc.

5 "*Study on the Economic Importance of Industries and Activities Protected by Copyright and Related Rights in the MERCOSUR Countries and Chile*", WIPO Publication No. 889.1(E), ISBN 92-805-1136-9, WIPO 2002.

6 "*The Economic Contribution of Australia's Copyright Industries*", The Allen Consulting Group 2001, ISBN 1-875833-81-1.

7 Scheuch, Fritz/Holzmuller, Hartmut (1989): "*The Economic Importance of the Copyright Industries in Austria*". Vienna University of Economics and Business Administration, Orac Verlag, ISBN 3-7015-4295-3.

8 "*Copyright in Canada: Proposals for a Revision of the Law*," Ministry of supplies and services, A. A. Keyes and C. Brunet, publ. In Consumer Corporate Affairs, Canada, 24, Ottawa 1977 and Babe, R. E. Size of Canada's Copyright Industries, Canadian Patent Reporter, pp. 449.

9 "*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 2000.

10 Previous report was commissioned by the Ministry of education of Finland.

11 Hummel, Marlies (1989), "*The Economic Importance of Copyright in the Federal Republic of Germany*," *Institut fur Wirtschaftsforshnung*, Copyright Bulletin, ISSN 0010-8634 Volume XXIV, No 2, 1990.

12 "*Copyright White Paper - A view from the perspective of copyright industries*," Copyright Research and Information Center 2001, JCI series, Tokyo.

13 "*The economic importance of copyright in the Netherlands in 1998*", 2000 Report, Research by SEO Amsterdam Economics, Dir. Hana Budil, prof. Dr. Jules Theeuwes, drs. Corine Zijderveld, Dutch Copyright Federation, August 2000, SEO-rapport nr. 559, ISBN 90-6733-185-6.

14 "*Employment in Copyright-based Industries," 1993* Copyright Council of New Zealand. See also Strombergen, A., The Economic Contribution of Copyright-based Industries in New Zealand, Wellington, 1989.

15 "*The Economic Importance of Copyright Industries in Norway*", Norwegian Copyright Industries in 1999, Study Report, Turku School of Economics and Business Administration, Business Research and Development Centre Media Group, Timo Einari Toivonen and Robert G. Picard, 2002, Finnish Copyright Society and Finnish Copyright Institute, ISBN 952-9855-23-0, Publication No 24 (2002), Frenckell Printing Works Ltd, Helsinki 2002.

16 The findings in the study can be consulted in "*The Impact of Copyright Law on the Economy of Sweden*," Stockholm, Swedish Central Bureau of Statistics, 1982 and Olsson Henry, Copyright in the National Economy, Geneva 1982.

17 "*The Economic Importance of Copyright*", Jennifer Phillips MSc (Econ), Published by the Common Law Institute of Intellectual Property Limited, 1985 CLIP Charles Clore House, 17 Russel Square, London WC1B 5DR, see also "*The Economic Importance of Copyright*", Tristan Price MA MSc ACA, The Common law Institute of Intellectual Property 1993, ISBN 1 874001 12 X.

18 "*Copyright Industries in the US Economy*", The 2002 Report, by Stephen E. Siwek, Economists Incorporated, prepared for the International Intellectual Property Alliance, Washington 2002, ISBN 0-9634708-0-9.

19 Previous studies have been commissioned by the United States Copyright Office, The United States Senate and the American Copyright Council.

20 At *www.wipo.int/treaties/documents/english/word/e-berne.doc*

21 The use of the term "copyright legal framework" also covers related rights.

22 Check Jennifer Skilbeck, "*The economic importance of copyright*," International Publishers Association, 1988. In this book the author questions the results of some previous studies and even proposes a reassessment of the estimates in them.

23 The Convention for the Protection of Producers of Phonograms Against Unauthorized Duplication of their Phonograms - Phonograms Convention (Geneva, 1971) and the Convention Relating to the Distribution of Program-Carrying Signals Transmitted by Satellite of 1973.

24 Art.2., Berne Convention for the Protection of Literary and Artistic Works.

25 "*Basic Notions of Copyright and Related Rights*," WIPO/CNR/KTM/97/1.

26 See "*WIPO Intellectual Property Handbook: Policy, Law and Use*" WIPO Publication No. 489 (E), ISBN 92-05-1004-8, Geneva, WIPO 2001, p. 43.

27 Independently of economic rights international conventions provide also "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 measuring the economic effects of moral rights and hence those are not considered in *the Guide*.

28 The list proposed here follows the language of the provisions of the Berne Convention and the WIPO Copyright Treaty. In the national laws, the rights in many cases are called and categorized in a different manner. Sometimes national law grants even a higher level of protection.

29 See Art.7 WCT and Art. 9 and 13 WPPT.

30 See "*WIPO Intellectual Property Handbook: Policy, Law and Use*," WIPO Publication No. 489 (E), ISBN 92-05-1004-8, Geneva, WIPO 2001.

31 Sometimes the term neighboring rights is used, which for the purposes of *the Guide* is applied as a synonym to related rights.

32 The term "media economics" is also relevant in the literature on the copyright industries. Reference to it is to be found in the glossary of *the Guide*.

33 "*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.

34 "*Economics*", Paul A. Samuelson, William D. Nordhaus, Fourteenth Edition, 1992, ISBN 0-07-054879-X, p. 31

35 For the sake of being comprehensive 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 with regard to intellectual property or copyright in particular. At the same time it should also be recognized that there are no sufficiently elaborated alternatives to this approach as yet. See Ove Granstrand, "*The Economics and Management of Intellectual Property, Towards Intellectual Capitalism*," Edwar Elgar Publishing, Limited, UK, 1999, ISBN 1-85898-967-1, p. 21.

36 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 that 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 that consume without payment).

37 Towse, Ruth and Rudi Holzhauer (eds) (2002), "*Economics of Intellectual Property Rights*", 4 Vols. in the Edward Elgar International Library of Critical Writings in Economics. Vol. 1 on Copyright.

38 This concept could be summarized to 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, 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 more detailed discussion see Richard Watt "*Copyright and Economic Theory-Friends or Foes*," Edward Elgar Publishing Limited, Printed in Great Britain, 2000, ISBN 1-84064-312-9, p. 5.

39 "*Economics*", Paul A. Samuelson, William D. Nordhaus, Fourteenth Edition, 1992, ISBN 0-07-054879-X, p. 311.

40 An economic good is a good that is scarce relative to the total amount of it that is desired. I must therefore be rationed, usually by charging a positive price ("*Economics*", Paul A. Samuelson, p. 735). Copyright provides an incentive to produce the goods that are consumed, i.e., it is a trade off between the higher price and the output of the good.

41 Under distributive efficiency is understood a situation under which no reorganization or trade could raise the utility or satisfaction of one individual without lowering the utility or satisfaction of another individual (also called Pareto efficiency), in "*Economics*", Paul A. Samuelson, William D. Nordhaus, Fourteenth Edition, 1992, ISBN 0-07-054879-X, p. 729.

42 Cultural goods are consumer goods that convey ideas, symbols, and ways of life. They inform or entertain, contribute to build 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.*

43 The monopoly in this case is not of a traditional type. In some literature the monopoly that copyright creates is assessed as no different from the monopoly that 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.

44 Externalities exist when private costs and benefits do not equal social costs or benefits. See "*Economics*", Paul A. Samuelson, William D. Nordhaus, Fourteenth Edition, 1992, ISBN 0-07-054879-X, p. 737.

45 Richard Watt "*Copyright and Economic Theory - Friends or Foes*," Edward Elgar Publishing Limited, Printed in Great Britain, 2000, ISBN 1-84064-312-9, p. 12.

46 By "value added" is understood the difference between the values of goods produced and the cost of materials and supplies used in producing them, see "*Economics*", Paul A. Samuelson, William D. Nordhaus, Fourteenth Edition, 1992, ISBN 0-07-054879-X, p. 748.

47 See Olson, Mancur (1965), "*The Logic of Collective Action, Public Goods and the Theory of Groups*", Cambridge: Harvard University Press, (Seventeenth printing, 1998), p. 35-6.

48 The experts are those who participated in the Meeting of the Working Group of Experts on the preparation of *the Guide* on Surveying the Economic Contribution of the Copyright-Based Industries, held in Helsinki from July 2 to 5, 2002 (see paragraph 5).

49 Caves, Richard (2000), "*Creative Industries*", Cambridge, Harvard University Press.

50 "*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 2000, p. 5.

51 Secondary use raises some questions for 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 firms, copyrights are also capital assets.

52 For more reading on the subject see Shapiro, C. and Varian, H. (1999), "*Information Rules*", Harvard Business School Press, Boston.

53 For more reading on the subject see Bettig, R. (1996), "*Copyrighting Culture*", West view Press, Boulder.

54 See Towse, Ruth (2001), "*Creativity, Incentive and Reward; An economic analysis of copyright and culture in the information age*", Edward Elgar Publishing, Cheltenham.

55 Towse, Ruth, "*Cultural Economics, Copyright and the cultural industries*," proceedings from the conference "The Long Run" at Erasmus University, Rotterdam, February 2000, p. 113.

56 The term "copyright materials" refers to works or other subject matter which are protected by copyright or related rights.

57 Research work can be captured under the specific functional field it is involved in. For example some researchers may be authors, others could be working in educational institutions, but some may be involved in company research or advertising. For that reason it was not considered appropriate to specify it as a separate category since it can not be properly measured as a separate activity.

58 "*Copyright Industries in the US Economy*", The 2002 Report, by Stephen E. Siwek, Economists Incorporated, prepared for the International Intellectual Property Alliance, Washington 2002, ISBN 0-9634708-0-9. Check Appendix C of the Report.

59 For more details see *www.census.gov*.

60 These categories are sometimes not broken down in national statistics.

61 Greeting cards.

62 Outlets dealing specifically with the distribution of newspapers, magazines, etc.

63 Libraries may represent the value added in the distribution. But if they are consumers they would come under revenues paid in the other categories.

64 Meaning theatrical distribution.

65 Here we mean dedicated video rental outlets which would exclude rental or sale of videos in major department stores.

66 Often under the allied services one would refer to activities that would be covered under related rights such as subtitling, dubbing, etc.

67 Services specifically related to radio and television.

68 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 are usually not captured in the studies. In photography for example when reproducing photos for personal use you are not talking about commercial use. Photography has a non-commercial, private aspect and it can not be included fully as a core industry.

69 In 2002 WIPO published six studies on the economic impact of the protection of non-original databases in developing countries. Those can be consulted at *http://www.wipo.int/copyright/en/index.html*. The issue of the international protection for non-original databases is being discussed currently by WIPO's Standing Committee on Copyright and Related Rights.

70 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 we refer to the value added by the societies themselves in the form of salaries of the people working there.

71 Equipment may include infrastructure elements and facilities.

72 In many countries fashion would be covered in statistics under apparel in textiles.

73 The value added under copyright to be separated from the value of the material.

74 Naturally in different countries the copyright element in furniture will be different, but this will have to be established by the researcher.

75 Part of architecture is just service oriented.

76 Here we refer to two-dimensional engineering drawings which in some countries enjoy copyright protection.

77 For more information visit *http://www.law.columbia.edu/conferences/2001/3_reports_en.htm*.

78 Only that portion which is attributable to works and other protected subject matter should be included.

79 These 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, "*Tourism Satellite Account: Recommended Methodological Framework, 2001*".

80 For a description of the contribution of copyright to firms see Carlos M. Correa, "*Methodologies for Evaluating the Economic Importance of Copyright and Neighboring Rights in Latin America*," (2000) 24(2) Copyright Bulletin 5 at 12-15.

81 "*Copyright-based industries in the US Economy*", The 2002 Report, by Stephen E. Siwek, Economists Incorporated, Prepared for the International Intellectual Property Alliance, Washington 2002, ISBN 0-9634708-0-9, p. 4.

82 "*The Economic Contribution of Australia's Copyright Industries*", The Allen Consulting Group 2001, ISBN 1-875833-81-1, p. iii.

83 "*The economic importance of copyright in the Netherlands in 1998*", 2000 Report, Research by SEO Amsterdam Economics, Dutch Copyright Federation, p. 9.

84 See "*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.

85 See "*Macroeconomics*", Richard G. Lipsey and Paul N. Courant, Eleventh Edition, Harper Collins College Publishers, 1996, ISBN 0-673-99478-3, p. 443.

86 Consumption expenditures includes expenditure on all goods and services produced and sold to their final users during the year. *Ibid*, p. 444.

87 Investment expenditure is expenditure on the production of goods not for present consumption. *Ibid*, p. 444.

88 Only government expenditure of currently produced goods and services is included as part of the GDP, *Ibid*, p. 446.

89 Net exports are defined as the total exports minus total imports, *Ibid*, p. 446.

90 From the income side, GDP is the sum of the factor incomes that are generated in the process of producing final output (wages, rent, interest, profits) plus indirect taxes net of subsidies plus depreciation. *Ibid*, p. 448.

91 For more theoretical reading on the production, earnings or cost approach you may consult "*Macroeconomics*", Richard G. Lipsey and Paul N. Courant, Eleventh Edition, Harper Collins College Publishers, 1996, ISBN 0-673-99478-3, pp. 442-450.

92 The problem of double-counting is solved by the introduction of the two types of output. Intermediate products are outputs of some firms that are inputs for other firms. Final products are goods that are not, in the period under considerations, used as inputs by other firms. *Ibid*, p. 443.

93 For example, see *http://www.oecd.org/EN/document/435-15-no-1-22204-0,00.html*.

94 Transactions that occur in the underground economy may be perfectly legal in themselves, but are not reported for tax purposes.

95 Including leisure.

96 Any attempt to incorporate externalities should acknowledge that there are likely to be unpriced externalities associated with other industry sectors, which may or may not be larger than the copyright-based industries' externalities. Hence the relative value of the copyright-based industries may be understated or overstated from this broader concept of value.

97 The Allen Consulting Group, "*The Economic Contribution of Australia's Copyright Industries*", Australian Copyright Council & Centre for Copyright Studies, Sydney, 2001, p. 3.

98 See also Section 7.2.1.

99 The input-output tables, developed first in the 1930s by Wassily W. Leontief are published today by most countries at regular intervals, some mapping transactions among hundreds of sectors. Modern information technology supports still greater sectoral details as well as dynamic, multiregional, and other complex data-intensive applications. The input-output technique allows studying 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 *http://web.mit.edu/krp/www/iioa/*.

100 See Robert Johnson, "*Input-Output Models With and Without the Multiplier Effect*" in Kristine Corcoran, Alison Allcock, Tom Frost & Leanne Johnson (eds), "Valuing Tourism: Methods and Techniques", Bureau of Tourism Research Occasional Paper No. 28, Bureau of Tourism Research, Canberra, 1999, pp. 90-98.

101 Hans Hoegh Guldberg, "*The Arts Economy 1968-1998: Three Decades of Growth in Australia*", Arts Council of Australia, Sydney, 2000, p. 99.

102 See Hans Hoegh Guldberg, "*Copyright: An Economic Perspective*", Australian Copyright Council, Sydney, 1994; The Allen Consulting Group, The Economic Contribution of Australia's Copyright Industries, Australian Copyright Council & Centre for Copyright Studies, Sydney, 2001.

103 For example, while it is commonly assumed that the Caribbean nations are broadly similar, in individual sectors they are often at widely diverging stages of development and at different points in the business cycle.

104 See *http://www.gtap.agecon.purdue.edu/welcome/project.asp*.

105 See The Allen Consulting Group, "*The Economic Contribution of Australia's Copyright Industries*", Australian Copyright Council & Centre for Copyright Studies, Sydney, 2001, p. 8, 19.

106 See Hans Hoegh Guldberg, "*Copyright: An Economic Perspective*", Australian Copyright Council, Sydney, 1994.

107 For an example, see Günther G. Schulze, "*International Trade in Art*" (1999), 23 Journal of Cultural Economics 109.

108 For an example, see Birgitte Andersen, Zeljka Kozul-Wright & Richard Kozul-Wright, "*Copyrights, Competition and Development: The Case of the Music Industry*", UNCTAD/OSG/DP/145, 2000.

109 See *http://www.gtap.agecon.purdue.edu/welcome/project.asp*.

110 For examples, see Keith E Maskus, "*Trade-Related Intellectual Property Rights*" (1993), 52 European Economy 157; John Revesz, Trade-Related Aspects of Intellectual Property Rights, Staff Research Paper, Productivity Commission, Canberra, 1999, pp. 63-64.

111 Source: John Reyesz, "*Trade-Related Aspects of Intellectual Property Rights*", Staff Research Paper, Productivity Commission, Canberra 1999, p. 63.

112 Data is based on Mascus, K.E. 1993, "*Trade-related intellectual property rights*," European Economy, Vol. 52, pp. 157-84.

113 Note the word "industry," even though, like copyright, tourism crosses many traditional industry definitions.

114 See Commission of the European Communities, Organization for Economic Co-operation and Development, World Tourism Organization & United Nations, "*Tourism Satellite Account: Recommended Methodological Framework 2001*".

115 The issue of statistics, which is crucial for implementing the study will be discussed in detail in Chapter 7.

116 Source: United Nations at *http://unstats.un.org/unsd/cr*.

117 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/historical/isic/default.htm*.

118 At *http://unstats.un.org/unsd/class/family/historical/isic/default.htm*.

119 *Ibid*.

120 It was considered and approved by the Statistical Commission at its twenty-fifth session and issued in 1990 as Statistical Papers, Series M, No. 4, Rev.3.

121 At *http://unstats.un.org/unsd/class/family*.

122 The United Nations' equivalent to CPA is the CPC - Central Product Classification.

123 These classifications are compatible with ISIC.

124 The corresondence table between NACE Rev.1.1. and ISIC Rev.3.1. can be consulted at: *http://unstats.un.org/unsd/cr/registry/regso.asp?Ci=27&Lg=1*

125 GVA, gross value added, 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.

126 See Chapter VI in "*System of National Accounts 1993*," Brussels/Luxembourg, New York, Paris, Washington, D.C., 1993.

127 The process of implementation of the SNA methodology is progressing at a fast pace. It is likely to soon be a universally adopted. The implementation of this methodology is being monitored by a Task Force, established within the United Nations Statistical Commission.

128 See for example "*Copyright White Paper - A view from the perspective of copyright industries*," Copyright Research and Information Center 2001, JCI series, Tokyo, p. 25.

129 See SNA 1993, paragraphs 6.38.

130 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.

131 Intermediate consumption does not include expenditures by enterprises on valuables consisting of works of art, precious metals and stones and articles of jewelry 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, etc. For more complete discussions on this item see paragraphs 6.147, 6.148 and 6.149 of the SNA 1993.

132 See SNA 1993, paragraphs 7.80-7.85.

133 See SNA 1993, paragraphs 7.21 and 7.31.

134 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 SNA 1993 take due account of this fact. For more details see paragraph 6.5. of SNA 1993. See also paragraphs 10.27, 6.179, 10.118.

135 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 compensation of employees paid. See SNA, paragraph 7.49.

136 Taxes on products, excluding VAT, import and export taxes, consist of taxes on goods and services that become payable as a result of the production, sale, transfer, leasing or delivery of those goods or services, or as a result of their use for own consumption or own capital formation. See SNA, paragraphs 7.69, 15.47.

137 See SNA 1993, paragraphs 7.71 and 15.52.

138 See SNA paragraph 7.79.

139 "*Copyright White Paper - A view from the perspective of copyright industries*," Copyright Research and Information Center 2001, JCI series, Tokyo, p. 32.

140 *Ibid.*

141 If available from surveys of corporate financial statements.

142 Those indicators are often bookkeeping entries.

143 Services are understood to be outputs produced to order and typically consist of changes in the conditions of the consuming units realized by the activities of producers at the demand of the consumers; by the time their production is completed they must have been provided to the consumers. For more details see SNA1993, paragraph 6.8.

144 See SNA, 1993, paragraph 7.5.

145 At basic prices.

146 Net.

147 This indicator should be directly available if the SNA methodology has been implemented.

148 This is an example of how you can approach this issue. Operating profit rate has also been used. It has been calculated as 1 - Cost of goods sold rate - the Sales and general administrative expenses rate. See for example "Copyright White Paper - A view from the perspective of copyright industries," Copyright Research and Information Center 2001, JCI series, Tokyo.

149 This indicator may not always be directly reported or can be reported after obtaining it through the application of other methods.

150 It is referred to indirect taxes. As explained earlier in this Chapter, they are no longer reported as indirect, according to the SNA 1993 methodology, but as taxes on products and other taxes on production. See also SNA 1993, paragraph 7.50.

151 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.

152 Goods are understood as physical objects for which a demand exists, over which ownership rights can be established and whose ownership can be transferred from one institutional unit to another by engaging in transactions on markets. See also SNA, paragraph 6.7.

153 See "*The Economic Importance of Copyright*," Tristan Price, CLIP 1993, London, pp. 16-17.

154 Taken from "*Copyright White Paper - A view from the perspective of copyright industries*," Copyright Research and Information Center 2001, JCI series, Tokyo, p. 98.

155 This method has been applied in some of the studies. See for example the UK study in "*The Economic Importance of Copyright*," Tristan Price, CLIP 1993, London, p. 16.

156 See for example "*Copyright industries in the US Economy*" by Stephen E. Siwek and Harold W. Furchtgott-Roth, for the International Intellectual Property Alliance, November 1990, Appendix C, C-1.

157 The copyright factor is understood to be the level of dependence on copyright that will be established through a weighting system.

158 All figures are taken from "*The Economic Contribution of Australia's Copyright Industries"*, The Allen Consulting Group 2001, ISBN 1-875833-8-1, p. 16, and "*Copyright industries in the US Economy*" by Stephen E. Siwek and Harold W. Furchtgott-Roth, for the International Intellectual Property Alliance, November 1990, Appendix B, B-8.

159 The United States study, for example, Siwek and Mosteller, 1999.

160 See "*The Economic Contribution of Australia's Copyright Industries*," The Allen Consulting Group 2001, ISBN 1-875833-81-1.

161 *Ibid* , p. 13.

162 An assumption that sometimes is made is that these effects are mutually balanced in the economy.

163 Similarity could be established using World Competitiveness Reports, GDP indicators, etc. See for example *www.imd.ch/wcy* or *www.weforum.com*.

164 See "*The Economic Importance of Copyright Industries in Norway*," Norwegian Copyright Industries in 1999 Study Report, p. 9. Partially, the Australian study has also made use of ratios established in the New Zealand study. See "The Economic Contribution of Australia's Copyright Industries," The Allen Consulting Group 2001, ISBN 1-875833-81-1, p. 16.

165 See "*The Economic Importance of Copyright Industries in Norway*," Norwegian Copyright Industries in 1999 Study Report, p. 10.

166 For some of the sectors, comprising the industries with less dependence on copyright, an even smaller number of companies can be sampled.

167 A list of questions that have been asked in the interviews carried out in the process of preparation of the Japanese study can be found in "*Copyright White Paper - A view from the perspective of copyright industries*," Copyright Research and Information Center 2001, JCI series, Tokyo, p. 117-126.

168 In the US 2001 survey the core copyright industries amount to 67% of the total contribution of the copyright-based industries, in Finland (1997) - 82%, and in Australia (2000) - 51% (this percentage will be higher if some of the industries included under distribution in this study are moved to the core sector, as proposed in Chapter 4 of *the Guide*). That would yield for the non-core activities an average percentage of 33%. The proportion that may be established within this average could, for example include an assumption for the interdependent copyright industries - 20% to 27%, for partial copyright - 2% to 4% and for non-dedicated support industries - between 1% and 2% (Total 33%). This would reflect the logic of the distinctions between industries. International comparisons based on the past studies would always be approximate because of the different categories of copyright-based industries adopted in each study.

169 See for example "*Copyright industries in the US Economy*" by Stephen E. Siwek and Harold W. Furchtgott-Roth, for the International Intellectual Property Alliance, November 1990, Appendix B, B-6.

170 IGP – Industry Gross Product. The measure has been used in Australia for periods prior to 1997-1998, representing the measure of the contribution by some industries to GDP. See The Australian study "*The Economic Contribution of Australia's Copyright Industries*," p. 18.

171 "*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, p. 16.

172 *Ibid*, p. 17.

173 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 exclude the possibility of making important conclusions of the growth rates in subsequent surveys.

174 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 details should be decided by the research team.

175 SNA 1993, paragraph 15.1-15.178.

176 SNA 1993 on the Web and can be consulted easily by any research team.

177 SNA 1993 describes the SNA conceptual system, which is applicable to economies around the world. It does not attempt to provide guidance on how to make estimates, on the priority with which different accounts should be implemented or on the frequency and format of their presentation.

178 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/sna1993/introduction.asp*.

179 Foreign trade statistics is produced quite regularly almost everywhere and are widely used for international comparisons.

180 See "*European system of accounts*", ESA 1995, Eurostat, Luxembourg: Office for Official publications of the European Communities, 1996, ISBN 92-827-7954-8, ECSC-EC-EAEC, Brussels. Luxembourg, 1996.

181 For more information see *www.europa.eu.int/comm/eurostat*.

182 See also Chapter 4.2.2.

183 Here we refer mainly to universal sources.

184 The OECD manuals provide useful information on measuring capital and productivity.

185 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*.

186 At *www.unesco.org/culture/industries/trade/index/shtml*.

187 WTO annual reports can also provide relevant information. See *www.wto.org*.

188 See for example the *UN Statistical Yearbook, Monthly bulletins of statistics, UN Common database, International merchandise statistics*, Yearbook of labor statistics (at *www.unstat.un.org/unsd*), *International financial statistics* (at *www.imf.org*) or at *www.worldbank.org*.

189 A list of some of the relevant non-governmental international organizations, which have consultative status at WIPO, can be consulted at *http://www.wipo.int/copyright/en/links/links.htm#ingos*.

190 As indicated in Chapter 6, a partial solution in these cases may be provided by employment statistics and finally exports.

191 In fact, from a developing country perspective, the public or private aspect may be less appropriate than the foreign or national ownership.

192 For example in the government statistics the export of a motion picture is reflected as 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.

193 Limitations, related to the frequency of statistics could be highlighted by way of introducing a table on the frequency of collection of the data by sources. See for example "*Copyright White Paper - A view from the perspective of copyright industries*," Copyright Research and Information Center 2001, JCI series, Tokyo, Appendix A I.

194 The group has been named officially the Canberra Group II, thus indicating the link with the work of the Canberra Group on Stock Statistics.

195 See STD/NA (2002)35, OECD Meeting of National Accounts Experts, Paris, 8-11 October, 2002.

196 SNA 93 offers a general definition of intangible non-produced assets as "legal constructs."

197 The hierarchy of assets is described in the Annex to Chapter XIII of the SNA 93.

198 See STD/NA (2002)35, OECD Meeting of National Accounts Experts, Paris, 8-11 October, 2002, p. 3.

199 For example patented entities might be replaced by scientific originals and inventions classified as produced intangible assets, *Ibid*, p. 4.

200 See STD/NA (2002)35, OECD Meeting of National Accounts Experts, Paris, 8-11 October, 2002, p. 4.

201 Chapter XIII of SNA 93 defines other intangible fixed assets as "new information, specialized knowledge etc., not elsewhere classified, whose use in production is restricted to the units that have established ownership rights over them or to other units licensed by the latter." The exact scope of this category needs further precision. In terms of the relevant tangible fixed assets the Group may consider issues related to the cost of ownership transfer, and the treatment of Buy/Own/Operate/Transfer (BOOT) Schemes.

202 See *UN Statistical Commission, thirty third session, 5-8 March 2002*, Room document supporting E/CN.3/2002/21.

203 *Ibid*, p. 8.

204 See E/CN.3/2002/21.

205 This table provides an example of the corresponding codes to some of the copyright-based industries (core and interdependent), according to NACE (the General Industrial Classification of Economic Activities), CPA (The Classification of Products by Activity) and PRODCOM (The European Community Statistical Survey of Industrial Production).

206 The sample should be representative in character and include sufficient number of large, medium-sized and small companies in the various sectors surveyed.

207 The main indicators have a key role and receiving information on them is crucial. With those data one could place the firm in the proper statistical category, the turnover, employment and export allow to assess the general contribution to the economy, value added can be calculated and a general understanding will be obtained on the importance of intellectual property to the overall operations of the firm.

208 If different products/services are produced by the same company, information needs to be provided on their proportion as part of total output.