

Economic Importance of Copyright Industry in Brazil¹

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Abstract

The objective of this article is to identify the main sectors and economic activities involved in copyright-related activities in Brazil, and to estimate their share of GDP, the number of people employed and their participation in trade flows. The results presented in the paper represent only as initial effort to measure the economic importance of the copyright industries in Brazil. The study faced two main difficulties: the first was the difficult of identifying the copyright industries. Which sectors should be included? What criteria should be used to include or exclude activities? The second was the difficult of measuring the industries and their economic contribution in terms of income generation, employment and trade. In this study copyright industry transcend what is commonly known as cultural industry. Therefore, a methodology was needed to establish which activities to include in the universe of copyright industries. The methodology adopted followed closely that used by Siwek and Mosteller (1999), and grouped activities into four groups (Core, Distribution, Related Industry, and Partially Related industry). The most important results were that Copyright Industries generated approximately 6.74% of Brazilian GDP in 1998, and was responsible for 5% of total employment and occupation. Exports reached U\$ 450 million at the end of the 1990s while total imports were between U\$ 1.3 and U\$ 1.4 billion, less than 2% of Foreign Trade.

Keywords: Intellectual property, authors' rights, copyright industry, cultural industry and economic importance of copyright industry.

¹ This article was based on the final report for the research project entitled “*Importancia Económica de las Actividades Protegidas por Derechos Autorales de los Países del MERCOSUR y Chile* (Economic Importance of Copyright-Protected Activities in the MERCOSUR Countries and Chile)” financed by the World Intellectual Property Organization (WIPO) and conducted by the Study Group on the Organization of Research and Innovation (GEOPI), of the Department of Scientific and Technological Policy/Geosciences Institute/Unicamp (geopi@ige.unicamp.br). Professor Antônio Buainain coordinated the study, with the assistance of Dr. Sergio Paulino, both associated researchers of GEOPI.

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1. Introduction

The aim of this article is to measure the economic importance of the so called copyright industries in Brazil and to indicate, although superficially, the main problems rose by companies and authors involved in copyright related activities in Brazil. The article is divided into four sections. In the first section a general characterization is made of the Copyright Industry in Brazil, including indirect indicators of recent economic performance of main activities related to copyright. The second section describes the methodology used for identifying and measuring Copyright Industry in Brazil. The third section presents the results obtained, such as estimates of added value, employed personnel, and the foreign trade related to the Copyright Industry in Brazil. Finally, conclusions are presented in section 4.

2. The Copyright Industry in Brazil: General Characterization

The activities that comprise the so-called copyright industry are spread into several different sectors of the economy, have varied dynamics and market structures. One first task is to identify and delimit those sub-sectors and segments related, directly and indirectly, to those activities protected by copyrights. It is also important to identify the mechanisms that guarantee copyrights, the influence they exert on the legislation and economic dynamics as well as their effectiveness in the economy.

Copyrights are at the hart of modern information society and in particular of a broad range of economic activities which are grossly identified as “cultural industry”. In Brazil the cultural industry has registered robust rates of growth even during the last decade when economy as a whole has been stagnant. A few indirect indicators illustrate the recent evolution of the various sectors, sub-sectors and segments that are directly and indirectly related to the copyright industry.

Audio-visual activities have a strong participation in the Brazilian cultural industry. In 1997 the audio-visual area generated income over U\$ 5 billion, which represents by far the largest contribution to Brazilian cultural industry gross product.

Brazilian television occupies an important place in activities related to copyrights in Brazil. More that 80% of the income of the audio-visual industry is related to publicity and the subscriptions by television networks, while the income from cinema comes to U\$ 357 million, a little over half from rentals and sales of videotapes.

As in other countries, television in Brazil has expanded rapidly in recent decades and in 2002 the country had the sixth greatest number of television receivers in the world (Ministério da Cultura, 1999). The widespread presence of television has reduced the expansion of movie theaters, especially in small and mid size cities are less developed regions of the country. While cinema has become more expansive and can not reach audiences that have difficulty in reading

sub-titles, price of TV sets have fell in real terms and TV signal reaches virtually the entire Brazilian territory. Since there is no specific legislation to stimulate investments in the production of domestic films for TV, Brazilian television networks have specialized in the production of soap operas.

The publishing market grew steadily during the 1990s; thrust forward by the modernization of the printing industry and the increase in the number of students at all the levels. Book production and sales have oscillated considerably; falling during years of economic crisis such as 1990 to 1992 just to rise again as the economy recovers. In 2000 books sales more than doubled 1990 level. Another point to be noted is that, from 1994 onwards-real prices have risen more than production. However, in 2000 book production was nearly 100% greater than that seen in the early 1990s, and fewer books were sold in the following years, although at higher prices than in 1990.

It should be noted that book consumption levels in Brazil are still low. In 1998 consumption was 2.5 books per inhabitant, as compared to seven per inhabitant in the USA and 15 in the Nordic countries. The low relative number of book readers is mostly due to structural barriers such as its skewed income distribution, low levels of schooling and high level of illiteracy amongst the poor. Another factor is that much of the country's book consumption is concentrated in the schoolbook sub-sector. For example, this sub-sector represented 39% of all published titles in 1998 and 66% of the number of books produced. These figures fell to 34% and 61%, respectively, in 1999. As market is not as large as the population size would indicate, the strategy of leading publishing houses is to increase the number of new titles as a way to diversify consumption by a limited segment of the population. This perspective limits economy of scales gains, increases printing costs and publishers risks (Gazeta Mercantil, 2000).

The Brazilian disc market is one of the largest in the world, having grown extraordinarily in recent decades. In 1998 it was the sixth largest in the world and fell to seventh place in 1999, basically as the result of the devaluation of the Brazilian currency. Although this study does not deal with the issue of piracy and unauthorized reproduction, it is safe to say that the phonographic segment is one of the most affected by sales of pirated products and unauthorized copies.

A number of factors have contributed to increase in unauthorized music reproduction, the most important being technological progress. It is now possible to make copies with the same quality as the originals at low costs. The infrastructure for producing CDs and tapes require low investment and allows great mobility. In addition, copies can be easily obtained from internet without costs to users. Another no less important factor is the high prices charged by the phonographic industry for the originals (Salvio, 2000)

3. Methodology

The methodology adopted by the study departs from that proposed by Siwek and

Mosteller (1999) and applied by them to the USA. Siwek and Mosteller considered four groups of activities. The first they termed “core copyright industries”, i.e., those industries that create copyright works as their primary products. The second group is termed “partial copyright industries, and include several activities whose products are only partially related or subject to copyright legislations, such as architecture and fabrics. The third group, “distribution”, comprises the industries that distribute copyrighted material to businesses and consumers, such as libraries and music stores. Finally, the fourth group is termed “copyright-related industries”, i.e. those that produce and distribute goods used wholly or partially in conjunction with copyrighted materials, such as computers, radios etc. The World Intellectual Property Organization (WIPO) has also adopted this methodology, with adaptations, as a guideline for identification and measurement of economic activities directly and indirectly related to copyrights.

The Brazilian statistical data available enabled identification of classes of activities at the four-digit level, based on the National Economic Activities System Classification (CNAE) of the Brazilian Geographic and Statistics Bureau (IBGE). CNAE adopted in full the recommendations of the United Nations, especially the International Standard Industrial Classification (ISIC, Revision 3), advocated by the UN as a means of harmonizing the production and dissemination of economic statistics at an international level (IBGE, 1977: 8). Information from the Central Corporate Records (CCR) for 1994 and 1998, published also by IBGE, were used for the estimation of personnel employed, number of companies and gross income generated by companies and activities.⁶

The economic activities related to copyrights were identified on the basis of the National Economic Activity Classification (CNAE) (IBGE, 1977). Each four-digit level class was analyzed by taking into account the description of its contents, which indicated in which group defined by the overall methodology of the study the activity should be classified (Carvalho, S. P., 2000). Forty four digit level classes were identified. Twenty-two of these classes belong to the Core group, nine to the Distribution group, twelve to the Copyright-Related Industries group and one to the Partial Copyright industries. The classes that comprise each of these groups as listed below, according to the nature of their activities. The Nature of Activity follows the scheme of the CNAE and of the IBGE economic performance surveys, namely, Annual Industrial Survey (PIA), Annual Trade Survey (PAC) and Annual Services Survey (PAS), which were also used as sources of data for the present study. The inclusion of telecommunications in the Distribution Group raises an obvious overestimation problem, as IBGE groups under telecommunication activities that are clearly related to copyright, such as television and radio broadcasting, and also some that have little or nothing to do with copyright, such as telephone services. To overcome such problem the results are presented with and without telecommunications.

6 CCR is used by the IBGE as an alternative to the Economic Census and provides information (number of companies, people employed and gross income) in each class at the four-digit level.

Classes of Activities of the Groups according to the Nature of their Activities

CORE GROUP

- **Industry**
 - Publishing: newspaper publishing and printing
 - Publishing: magazine publishing and printing
 - Publishing: book publishing and printing
 - Production of discs, recorded tapes and similar material
 - Publishing: publishing and printing of other graphic products

- **Services**
 - Consultancy in computer systems
 - Development of computer programs
 - Data processing
 - Databank activities
 - Publicity
 - Photographic activities
 - Production of movies and videotapes
 - Distribution of films and videos (computed jointly in ISIC)
 - Projection of films and videos (computed jointly in ISIC)
 - Radioactivities
 - Television activities
 - Theater, music, literary and other artistic activities
 - Theater and cinema management
 - Other performance activities not specified previously
 - News agency activities
 - Library and archive activities
 - Museum activities and conservation of historical landmarks

DISTRIBUTION GROUP

- **Trade**
 - Wholesale appliance trade and trade for other personal and domestic items

- Wholesale trade of stationery and office supplies; paper, cardboard and related material; books, newspapers and other publications
- Retail trade of machines and domestic and personal musical equipment, discs and instruments
- Retail trade of office, computing, and communications equipment and supplies
- Retail trade of books, newspapers, magazines and stationery
- Retail trade of used articles, in stores
- Retail trade by street vendors, vending machines and door-to-door salespersons
- **Services**
 - Rental of office machines and equipment
- **Telecommunications**

COPYRIGHT-RELATED INDUSTRIES GROUP

- **Industry**
 - Newspaper, magazine and book printing
 - Services of printing school material and material for industrial and commercial uses
 - Other printing services
 - Disk and tape reproduction
 - Videotape reproduction
 - Film reproduction
 - Reproduction of computer programs on diskettes and tapes
 - Computer manufacturing
 - Manufacturing of peripheral equipment for electronic data-processing machines
 - Manufacturing of radio and television receivers and recording, sound and video amplifying equipment
 - Manufacturing of optical, photographic and cinematographic apparatuses, instruments and devices
- **Services**
 - Maintenance and repair of office and data-processing machines

PARTIAL COPYRIGHT GROUP

- Services in architecture and engineering, and specialized technical consultancy

Source: National Economic Activity Classification – Cnae

The greatest difficulty regarding this study in Brazil was the lack of information for calculating the added value of each four-digit level class pertaining to the services sector. As a consequence, the Added Value in 1998 in the service sector was estimated from the Gross Value of Production (GVP) of 1994 in the service sector. A correlation between the GVP and 1994 GDP was estimated and projected to 1998 using 1998 known GDP value. Value added by service sector for 1998 were calculated according to this proportion, discounted by a dummy variable to take into account the differentiated growth of financial activities during 1994-98.

The numbers of people employed in each class was obtained from the Central Corporate Records (CCR) of the IBGE for 1994 and 1998. For some of the classes, the information for 1998 was not available at the four-digit level. In some situations the information available at the three-digit level (immediately higher aggregation level) consisted of the sum of the classes at the four-digit level. In these cases the information was considered at the three-digit level, which was the case, for example, of the classes entitled Radio Activities and Television Activities. Since the information was available at the three-digit level it is presented as a single class called Radio and Television Activities.

The Brazilian Foreign Trade Database was used to measure exports and imports related to the Copyright Industry, drawn up by the Sub-Department of Foreign Trade (SECEX). It includes all products imported and exported by Brazil - approximately 14,000 items. Some items appear individually and others are included within groups of other products that, in most cases, belong to a family (such as Item 49011000, which groups Books, Pamphlets and Similar Loose-leaf Forms). This database includes the period from 1989 to June 2000. It is important to emphasize that, with the formation of the MERCOSUR, the nomenclature used for the base underwent some changes. The Brazilian Merchandise Nomenclature (NBM), effective until 1995, was replaced by the Common MERCOSUR Nomenclature (NCM) as of 1996. In this study only the NCM nomenclature was used, a procedure which is compatible with the nomenclature of the other MERCOSUR countries.

4. Results

First of all it should be noted that the results presented bellow can not be compared to those of previous studies as our attempt was that of identify and measure economic importance of activities related to what might be called a "copyright economy", therefore broadening the concept of economy of culture.

The study has confirmed the economic importance of copyrights and culture industry in the Brazilian economy. Considering all the activities included in the "copyright economy – Core, Directly Related, Partially Related and Distribution– this sector was responsible for generating a Product of over U\$ 36 billion in 1998 (not including telecommunications), equivalent to 4.59% of Brazilian GDP. When telecommunications are included, the total rises to over U\$ 53 billion and represents approximately 6.7% of the total GDP for 1998. Though the figure with

telecommunications is obviously oversized as most activities registered under “telecommunication” is not related to copyright, the actual contribution of copyright industry to Brazilian economy is probably between 5 and 5,5% of total GDP. Compared with other activities, those protected by copyrights in Brazil in 1998 were a below agriculture (8.3%) and commerce (7.2%), but is higher than that of oil refining, the petrochemical industry (3.0%), automobile industry, including farm machinery and tractors, automobiles, trucks, buses, other vehicles, machines, and accessories (3.5%). The Partially Related Industries group had a relative share of 7.6%, a little higher than that shown by Siwek & Mosteller (1999) for the same group in the USA in 1996, of 6.1%. The Related Industries group came in fourth place in terms of added value, with 5.4%, much lower than that observed for the American economy in 1996 (11.4%).

In regard to the nature of the activities, industry had the lowest relative weight, less than 4% of the added value, whereas services were responsible for over half of added value, and telecommunications for almost one third. The share of trade was a little less than one tenth of the added value. Although cultural activities such as theater, circuses, music and museums added little value to copyright industry as a whole, its potential and effective capacity for generating jobs should not be ignored. In addition, the linkages between these activities and others such as supporting services, general equipments, furniture etc., should not be ignored as well as a source of income and employment generation in the economy. Cultural activities are spread throughout the country, and any supporting policy should emphasize specific local action, sponsored by municipalities, local companies etc., rather than centralized cultural programs sponsored by the federal government.

The importance of economic activities protected by copyrights for generating jobs should also be emphasized. In 1998 such activities absorbed 5% of all persons employed in Brazil. In addition to its significance in relative terms, the absolute numbers are also expressive. In 1998, more than one million persons were employed in those activities, in almost 250,000 companies.

Core and Distribution were the most important groups in terms of generating employment in 1998, representing more than 80% of all the jobs created in the copyright industry. In this item, the Core is undoubtedly responsible for more jobs than the Distribution group. Whereas this first represented almost half of the jobs, Distribution provided a little over one third. The greatest importance of the Core group in generating jobs is due to the nature of the activities included in the group, especially labor intensive industrial activities such as printing and activities of a cultural character based especially on the human element. Both the Related and the Partially related groups’ account, individually, for less than 1/10 of the companies and personnel working in copyright-related economic activities.

Comparing the performance of copyright-related economic activities in Brazil in terms of numbers of persons employed between 1994 and 1998, it was seen that there was an increase of approximately 233,000 people in the Core, the Related and Partially related groups, but the rate of growth was inferior to that of the country as a whole.

The greatest dynamism in the Core Group was found in the services sector, with emphasis on activities related to computing, consultancy in computing systems, and the development of computing programs. In this respect, the pressure to reduce costs should be seen as an important factor for change, as are also sectorial governmental policies such as support to the production and exportation of computer programs, and changes in the institutional environment, such as the Software Act (Banco do Brasil, 2000). Incentives to the audio-visual activities have also been effective as far as employment generation is concerned, as the number of persons employed by audi-visual firms grew above the national average during 1994-2000.

The study also showed that less than two percent of Brazilian trade involves copyright-protected activities. Total exports of copyright-protected products oscillated between U\$ 400 million and U\$ 500 million during 1994-2000. It should be noted the growth in the exportation of products in the copyright-protected Core Group. Products in the Publishing Sector showed the greatest weight in both imports and exports. The products grouped in the Musical Recording Category showed excellent performance in terms of exports. The total importation of copyright-protected products was approximately U\$ 1.3 billion, but with a downward trend. The Copyright-related Industries group represented over 60% of total imports and over 80% of total exports of Copyright Industry.

The revenue from copyrights in Brazil represents an expressive sum of U\$ 366 million, with the publishing sector being responsible for more than half of this total. Disk sales represent around 20% public performances of music, musical disks and literary-musical works respond for the remaining 25%. However, it should be noted that in relative terms collection of revenues from copyright activities is deemed, by authors, to be well bellow what they considered to be a “fair” distribution of benefits between players of the industry. According to authors’ associations, the problem is related to many causes, from ineffective collection organizations to asymmetries of negotiation power between industry and authors.

5. Conclusions

The share of Copyright-related Economic Activities in added value in Brazil in 1998 was similar to that calculated by Siwek & Mosteller (1999) for the USA in 1996. Analysis of the share of the various groups shows the importance of the Core and Distribution Groups, which, taken together, correspond to 87% of the value of Copyright Industry in Brazil. In the USA the Core Group represented over 50% while, in Brazil, the Distribution Group had a share equivalent to that of the Core Group, reflecting the differences among the audio-visual production sectors between the countries. While in the United States the weight of the phonographic and cinematographic industries is high, in Brazil large radio and television broadcasters that operate networks and distribute programs to their affiliated stations have a higher weight. These activities are included in the CNAE Class of Activities as Telecommunications,[4] together with those of pay-TV. Internet-related activities, which are growing rapidly in the country, are also classified under Distribution. Even taking into account the possibility that CNAE's accounting

may reduce the dimension of production activities there is no doubt that the Core Group should be stimulated and emphasized by public policies in both industrial and service-related activities.

It should also be emphasized that within each group the relative performance of sub sectors has varied considerably. In the Core Group, printing and publishing activities grew little in terms of the number of companies and kept the same number of persons working between 1994 and 1998. This was certainly associated to technological and corporate re-organizations resulting from the radical change in the Brazilian institutional environment, including trade liberalization, monetary stabilization and deregulation of the economy. In more general terms, it should be noted that the Brazilian publishing sector underwent a serious crisis in 1998 (Fundação João Pinheiro, 1999 and Gazeta Mercantil 2000) and that many companies adopted a strategy of lowering costs by outsourcing and by intensifying automation processes.

In the Copyright-related Industries Group, the Printing Industry and the area of Reproduction of Recorded Material showed growths of over 100% of the numbers of persons employed during the same period. In addition, 1998 was considered a good year for the phonographic industry (IFPI, 2000), which demands services and products from companies that provide the printing and reproduction of recorded material.

In terms of the origin of imported products, the USA and Europe are the most important suppliers. In terms of destination, the USA is the largest importer. The MERCOSUR region and Chile both carry significant weight in imports and exports. Also worthy of note is the growth of intra-block trade.

Several different types of factors influence the distribution of copyrights. In the case of the publishing sector, the difficulty in making copies of entire books means that the loss of revenue is concentrated in university textbooks. In the record market, technological development facilitates unauthorized copying. In addition, the difference between the prices charged by the industry and the cost of making unauthorized copies tends to encourage the development of the "pirate-copy" market. In these circumstances, strictly repressive action tends to be insufficient, and new strategies and mechanisms are needed for protecting and collecting rights.

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