

**IN SEARCH OF A METHODOLOGY TO ASSESS THE
COPYRIGHT INDUSTRIES IN DEVELOPING COUNTRIES: THE
EXPERIENCE OF MERCOSUR AND CHILE**

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ABSTRACT. The object of this paper is to present the methodology and key findings of a study entitled *The Economic Importance of the Industries & Activities Protected by Copyright or Related Intellectual Property Rights in the Mercosur Countries Plus Chile*, which may be useful as a basis for similar research in other developing countries. It should be noted that this is not an academic study designed to investigate hypotheses on the dynamics and role of the copyright industries or the role of intellectual property and related rights in the formation and evolution of the copyright industries. The purpose of the study is more modest. Its authors set out to describe the copyright industries in general terms and measure their importance in income formation, job creation and trade in the Mercosur countries (Argentina, Brazil, Paraguay and Uruguay) plus Chile. The study was commissioned by the World Intellectual Property Organization (WIPO) and the Mercosur countries plus Chile, which were interested in assessing the economic importance of the copyright industries in those countries.

1. INTRODUCTION

The Economic Importance of the Industries & Activities Protected by Copyright or Related Intellectual Property Rights in the Mercosur Countries Plus Chile is a pioneering study,¹ not least because the notion of a copyright industry is itself unheard of in these countries. Given the limitations intrinsic to such an innovative project, the study was designed to produce a preliminary map or outline of what might be classified in general terms as copyright industries. This entailed identifying the sectors, sub-sectors and segments involved in copyright-related activities, and estimating their share of GDP, the number of people employed and their participation in trade flows.

Intellectual property has traditionally been seen both as an institutional framework and an instrument that benefits the economically more advanced countries, whose corporations are the main owners of copyrights, patents etc. Hence the tendency for developing countries to overlook the importance of intellectual property issues to some extent. However accurate this view may be, the affirmation of intellectual property rights in international treaties and WTO TRIPS agreements

¹The general coordinators of the research project were Professor Antônio Márcio Buainain and Dr. Sérgio Paulino. The following professionals took part: Dr. Andrés López (Argentina), Dr. Belfor Gabriel Portilla Rodriguez (Chile), Dr. Ramiro Rodriguez (Paraguay), Dr. Luis Stolovich (Uruguay), and Drs. Sergio Salles Filho and Sergio Paulino de Carvalho (Brazil). The study was carried out under the aegis of the GEOPI research program at Unicamp, São Paulo, Brazil.

leaves developing countries with little choice but to adjust to the global institutional framework and seek to use it for their own benefit.

The study, which should be seen as an initial effort to measure the economic importance of the copyright industries in Mercosur plus Chile, faced two major difficulties. The first was the difficulty of identifying the copyright industries. Which sectors should be included? What criteria should be used to include or exclude activities? The second was the difficulty of measuring the industries and their economic contribution in terms of income generation, employment and trade.

The study represents only an initial approximation to these issues, laying a basis for further research. Above all, it draws attention to the need for more up-to-date information and knowledge of the copyright industries, which are increasingly important to modern economies. It is worth noting, as discussed in the methodological section, that other knowledge areas already use the idea of intersectoral articulation both to estimate the economic importance of the activities concerned and to understand the connections among sectors and activities ranging from the culture and tourism industries to agribusiness and electronics, among many others.

Constructing a knowledge base regarding the size, content and economic contribution of activities protected by copyright is a necessary step in recognizing their political importance and developing and implementing effective policies with a real impact, especially for cultural activities. This point is all the more important in light of the scant understanding of the articulations between the economy and culture, especially in developing countries. Evidence from other countries shows that these activities have significant potential capacity to absorb local labor, to generate and distribute income, and to enhance the value of local culture. They may also play a relevant role in dynamizing local economies and even international trade.

2. THE CULTURAL INDUSTRY AND COPYRIGHT

Copyright laws protect the intellectual property rights of the authors of original works in many different creative and artistic activities. This form of property has considerable influence over the dynamics of a contemporary economy and the performance of its various sectors and segments. Copyright is a cornerstone of printing, publishing and music, and of creative activities in the service sector, such as advertising, the media (newspapers, television, radio etc), cinema and other forms of entertainment (theater, shows etc). In fact, intellectual property can be seen as the essence of today's information society. The laws, standards and other regulations that define, protect and enforce intellectual property in various forms (copyrights, cultivars, patents, trademarks etc) play a key role in determining competitive advantages for companies, countries and regional common markets, in technology selection and development, and in investment decisions, among others.

The growing volume and economic importance of text, images and sound in circulation thanks to progress in information and communication technology steps up the pressure for tighter rules and mechanisms to safeguard copyright. However, digital technology makes the effort to enforce such rules largely innocuous.

Copyright-protected activities are dispersed throughout various segments of the economy, and these in turn are affected in different ways by copyright protection. Thus the first step must be to identify the sectors, sub-sectors and segments that directly and indirectly relate to copyright-protected activities. The second step is to identify copyright enforcement mechanisms and the influence of copyright legislation

and its enforcement on the dynamics of the economy. The study coordinated by Buainain et al. (2001) and published by WIPO presents a comprehensive overview of the copyright industries in Mercosur.

UNESCO defines what it calls the “cultural industries” as “those industries which combine the creation, production and marketing of content that is of an intangible and cultural nature. This content is protected by copyright and may take the form of goods or services. Cultural industries are labor-intensive and knowledge-intensive. They nourish creativity inasmuch as they promote innovation in processes of production and marketing” (UNESCO, 2000). In other words, the so-called cultural industries (films, books, records etc) comprise both activities that mass-produce material reproductions of cultural creations (literature, music, drama) using industrial methods, and the industries that produce physical supports for cultural works, such as publishing and the music industry. These material goods are repeatedly consumed (read, listened to) by consumers throughout their lifecycle. The existence of such products is linked to the development of reproduction technologies, from Gutenberg to the DVD, and implies that each product that includes a work is reproduced many times.

Extension of the notion of cultural industries to economic activities protected by copyright and related intellectual property rights was imperative for the purposes of the study, given the nature of the commission mentioned in the introduction above. Generally speaking, however, as will be seen in a moment, a review of the literature written from various angles on the economic importance of cultural industries suggests a search for homogeneity in analyzing these activities. This homogeneity is linked to activities that do not directly relate to the object of protection. Thus extending the scope of the concept led to the need to include, for example, the production of computers, as they alone enable software to be used, just as a radio or television receiver enables copyright-protected audiovisual content to be broadcast. Thus the production, distribution and marketing of these physical devices must also be considered, as must the bookshops that sell books or music stores that sell CDs.

Thus the search for data and information takes on a diffuse character, actually not involving homogeneous groupings, which would be more compatible with the multisectoral nature of the economic activities relating to copyright protection. It bears repeating that the delimitation of these activities is a crucial point in researching this field.

3. DELIMITATION OF THE COPYRIGHT INDUSTRIES

Having established the need to transcend the limits of the cultural industry, the first methodological step was to decide which activities to include in the universe of the copyright industries. The starting-point was to examine methodologies developed in other countries and in similar studies.

A study by García et al. (2000) sets out to estimate the size of the cultural and leisure industry as a proportion of the Spanish economy, emphasizing the role of creativity and art in shaping the industry. It links cultural production with economic activities grouped by segment and sub-segment into three types:

1. Type 1- Direct activities, i.e. activities protected by copyright and of a cultural nature proper. Also includes activities related to leisure and entertainment, such as shows, publishing, advertising, music, visual arts, film and

theater. Most of the arts are protected by copyright and related intellectual property rights. Type 1 does not include software, even for games and other entertainment-related activities;

2. Type 2 - Indirect activities, i.e. activities related to the use and diffusion of cultural creations produced by Type 1 activities, such as printing, telecommunications, film exhibition and distribution, photography and reprographic services;
3. Type 3 - Activities driven by the direct and indirect activities of Types 1 and 2, comprising the production of vehicles for transmission of cultural goods such as audio and video equipment, telecommunications equipment, paper pulp, paper and cardboard, cinematographic equipment and photographic equipment, among others.

Because the object of the study by García et al. (2000) is the leisure industry and not the copyright industry, it uses this methodology whereby activities that generate products primarily protected by copyright are grouped into different types. For the same reason, moreover, it does not cover software and related activities, or the production of computer equipment or the journalistic activities of news agencies that primarily produce material protected by copyright.

In a study centering on the United Kingdom, Phillips (1985) measured the importance of the copyright industries defined as comprising three main groups of activities. The first was the cultural industry properly speaking, with four sub-segments directly protected by copyright. The second consisted of a group of activities less directly dependent on copyright, such as advertising and architecture, among others. From the standpoint of copyright it does not seem justified to consider the activities included in the second group as distinct from those in the first: the law affords identical protection to the work of architects, musicians and authors. From the economic standpoint, however, it is possible to argue that these markets differ in terms of their dynamics and that the significance of copyright for the functioning of activities in group 2 is not as great as it is for activities such as the publishing of books and CDs, included in group 1. The third group encompassed activities linked to products created by the other two, such as the production of musical instruments, audio and video equipment.

While separating the activities primarily protected by copyright into two groups, Phillips (1985) included the distribution of copyrighted material in group 1 although the activity of distribution itself is not covered by copyright. But the main limitation of the methodology used in that study is the complete exclusion of the software industry despite the fact that software is directly protected by copyright, as well as partial exclusion of news (journalism) and other activities that depend less directly on copyright.

The variables used in the study were value added (measured as sales price minus total production cost) and employment. Foreign trade was not factored in.

The classification proposed by Miller & Stroombergen (1993) refers to New Zealand and is primarily designed to estimate the size of the workforce employed in copyright industries. It is limited to activities directly covered by copyright. New Zealand's Copyright Council succeeded in persuading Statistics New Zealand, the national statistical office, to upgrade its classification system so as to identify people employed in what it calls "copyright-based industries".

The analysis includes the following categories of workers in copyright-based industries: 1) artists; 2) dancers, actors and other performance artists; 3) radio, television and theater producers and directors; 4) photographers, audiovisual equipment operators; 5) computer analysts and programmers; 6) musicians, composers, arrangers; 7) writers, book binders and finishers, printers; 8) architects; 9) fashion, interior, industrial and stage designers; 10) toy and doll makers; 11) goldsmiths, silversmiths and precious stone workers.

One of the problems that arise from the classification used by Miller & Stroombergen (1993) relates to overlapping of activities protected by copyright and by industrial property and patents (e.g. industrial design). These occupations are not differentiated according to the type of intellectual property right involved. It is possible that this overlap derives from the characteristics of New Zealand law. Some of the tables include typically industrial occupations such as fashion or jewelry designer and even industrial designer as copyright-related (Miller & Stroombergen 1993: Appendix 1). Another problem is that the study covers only workers in cultural and artistic activities, excluding people occupied in activities not directly protected by copyright but related to these activities. Thus, for example, people employed in the distribution of copyright-based products and services are not considered. Nor are those employed in the production of the equipment used for transmission and reception of copyrighted material, such as computers or TV and radio receivers. The analysis also excludes the contribution of these activities to GDP as well as to exports.

In Uruguay, Stolovich et al. (2001) deploy the notion of a “productive complex”. Instead of taking activities in isolation or by category, they group together complexes or production chains which, like the publishing or recording industries, comprise activities dispersed across several segments or sub-segments, thereby separating directly or indirectly cultural and information-based activities from the rest.

Among the limitations of the methodology proposed by Stolovich et al. (2001) is the separation of activities primarily protected by copyright (cultural products and services are separated from software, for example) and the placing of similar activities in different groups (telecommunications is separated from the distribution of equipment for cultural and information-based applications, for example). Albeit useful for analyzing the economic dynamics of specific production chains in cultural industries, this methodology is inappropriate for understanding and appraising the overall universe of copyright-based industries, as opposed to solely or predominantly cultural ones. One of the problems is that a range of relevant activities, such as copyrighted material distribution and equipment manufacturing, participate in various different value chains. This entails computational difficulties if these value chains are aggregated to comprise a single industrial category.

In Brazil, Moisés & Albuquerque (1998) estimate the contribution of the “cultural economy” contribution to GDP and its workforce using data from the Brazilian National Accounts and the National Household Survey (PNAD) conducted annually by IBGE, the official statistics agency and census bureau. The cultural economy is defined as comprising activities directly protected by copyright and excludes indirectly related segments, thus covering only the generation and distribution of goods and services that involve artistic and cultural creations. The structure of Brazil’s national accounting system assumes a grouping together of homogenous activities,

so there are no problems with the identification and economic measurement of activities relating strictly to culture. The same applies to employment. Nevertheless, the same calibration is not possible when the universe to be assessed is extended to all copyright-related economic activities, as in the case of the study commissioned by WIPO.

A different perspective is used by Brazil's Ministry of Culture (1999) in a study of the economy of the motion picture industry. There is no difficulty in defining this sub-segment and the methodology is basically the same as that used by Stolovich et al. (2001) in Uruguay. The Brazilian study focuses on what it calls the audiovisual complex, estimating its economic importance in terms of the revenues generated (advertising, video sales and rentals, and theater ticket sales). The concept of a production complex or value chain enables the authors to explore technological determinants and market dynamics in greater detail, but at the same time it does not help with the task of measuring the industry's contribution to GDP since there is no measure of value added.

The best contribution from the standpoint of delimiting the copyright industry is by Siwek & Mosteller (1999), who estimated the importance of this industry in the United States. To do this they clearly established what activities were covered by the concept and the main source of information used to measure the U.S. copyright industry's importance in income generation, employment and trade. They considered four groups of economic activities. The first they termed "core copyright industries", i.e. those industries that create copyrighted works as their primary product. They "include newspapers and periodicals, book publishing and related industries, music publishing, radio and television broadcasting, cable television, records and tapes, motion pictures, theatrical productions, advertising and computer software and data processing. Most of these industries are engaged primarily in the generation, production and dissemination of new copyrighted material. Some, such as software (including business, education and entertainment applications) and data processing, include both the generation of copyrighted material and its application".

The second group is termed "partial copyright industries". This is a disparate collection of industries, only some of whose products are copyrighted materials, ranging from fabric to business forms to architecture. The third group, "distribution", comprises the industries that distribute copyrighted materials to businesses and consumers, such as transportation services, libraries, music stores, and other wholesale and retail establishments involved in the distribution of copyrighted products. The fourth group is termed "copyright-related industries", i.e. those that produce and distribute goods used wholly or principally in conjunction with copyrighted materials, such as computers, radios, televisions, and consumer recording and listening devices.

The authors stress that although they use an unprecedentedly broad concept of copyright industries, they nevertheless consistently underestimate the economic importance of copyright-related activities because their definitions "reflect conservative assumptions. Many large and important industries with copyright activities have not been included because copyright activities were considered to be too diffuse within the industry to be measured. For example, schools, colleges and universities are primary consumers of books and publications, and are also a source of much copyrighted material." For the same reason, establishments that repair the computers and television sets consumed jointly with copyright products (group 4) are not included in the study.

4. MERCOSUR AND CHILE: MEASURING THE ECONOMIC IMPORTANCE OF COPYRIGHT

Following a review of the literature, the coordinators of the project drafted a Technical Note (Carvalho, 2000) adapting the methodology proposed by Siwek & Mosteller (1999) to the conditions in the Mercosur countries and Chile. This established a link between the copyright industries as defined by Siwek & Mosteller (1999) and the National Economic Activity Classification System (CNAE) used by IBGE (1997). They 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, 1997:8).

This process led to a new classification, in which the categories defined by the CNAE were distributed at the four-digit level and with greater disaggregation across the four groups to be analyzed (core and partial copyright industries, distribution, and copyright-related industries). A total of 52 categories were selected at a four-digit level of aggregation in the four groups. These categories included industrial, commercial and service activities, reinforcing the multisectoral nature of the copyright and copyright-related industries. Those responsible for research in Argentina, Brazil, Chile, Paraguay and Uruguay were asked to seek the relevant data from the statistics bureaus of their respective countries. The aim was to see whether it was possible to merge the CNAE and ISIC, since both systems tend to follow international standards.

The importance of the Technical Note on methodology resides in its definition of the copyright industry at a relatively high level of disaggregation (four digits), pointing to possibilities of measurement based on the data available for each country and the data collection methods already in place. This made it possible to use such sources as economic censuses, annual performance surveys of industry, commerce and services, and the trade databases of countries in the region. On one hand this guaranteed a minimum of homogeneity in the data and on the other it allowed for increased flexibility in terms of sources for obtaining the available data.

The next step was a seminar to discuss the Technical Note produced by the coordinators. The participants raised issues relating to implementation of the project, especially the different time frames for national statistics and differences in collection methods (annual industry performance surveys in some cases, economic censuses in others), as well as use of the concept of value added for each category, activity and group and for the total copyright industry, so as to ensure compatibility among the various countries involved.

With regard to employment, it was agreed that estimates should be based on the criteria for aggregation by category of activity, group, and copyright industry. In the case of international trade, it was verified at the seminar that the sources of data (central banks in the various countries) have similar methods of collection and computation, presenting no significant problems except in the case of Paraguay, owing to the importance of non-monitored trade in that country, as noted by the consultant responsible for the study in Paraguay.

A table was produced to help visualize an example of how to work with the typology put forward by Siwek & Mosteller (1999) in conjunction with the CNAE and ISIC. This used data at the highest level of disaggregation (four digits), termed "classes". Each class was analyzed for the purposes of grouping classes into core

and partial copyright industries, distribution, and copyright-related industries. The next step was to identify product and service types and possibilities of overestimation in the data (i.e. whether they included some kind of activity not related to copyright as defined for this study).

The analysis of foreign trade was based on the same criteria to define categories or classes. Data came from the trade agencies of the countries in question, which have a common database using the Mercosur Common Nomenclature (NCM), compatible with the nomenclature in place around the world.

The analysis of employment drew on a wide range of sources, mainly population censuses, industry surveys and reports by institutions involved with copyright protection.

It was agreed at the seminar that the data used would be for a period as close as possible to 1998, since almost all the countries had GDP and employment statistics for that year except Argentina for GDP and Chile and Paraguay for employment. Export data was available for all five countries, although in the case of Paraguay the data was distorted by the importance of non-monitored trade. The chief concern was to assure the comparability of country data.

Argentina calculated GDP data on the basis of its 1994 Census, considered the only source capable of offering a comprehensive picture of copyright-related economic activities. More recent statistics were available from private sources for only a few segments.

In Brazil, contribution to GDP was computed using IBGE's annual surveys of performance indicators for industry, commerce and services. Activity classes defined on the basis of IBGE's National Economic Activity Classification System (CNAE) were grouped in terms of core and partial copyright industries, distribution, and copyright-related industries, as well as industry, commerce and services. Classes available at the four-digit level were grouped according to the annual surveys mentioned above. For those not available at the four-digit level, especially services (the results of the annual survey of services were not published until after the study was completed), value added in 1998 was computed on the basis of the gross figures corresponding to 1994. A correlation was established between gross value added and GDP for 1994, and this parameter was applied to GDP for 1998, discounting a financial dummy.

Chile's GDP was estimated using annual surveys of industry, commerce and services, as well as the culture and communications yearbooks, all produced by that country's statistics bureau. Private corporate reports were also consulted for additional information. The data for Chile referred to 1997 and 1998.

In the case of Paraguay it was difficult to compute value added at the four-digit level. The 1998 Industrial Census does not provide data disaggregated in classes, as proposed for this study. The alternative was to estimate value added on the basis of technical correlations calculated using information from the central bank and applied to the gross value of industrial production. Other information was obtained from interviews with company executives and business associations, in an effort to generate primary data. The data for Paraguay was probably underestimated.

Value added for Uruguay was calculated using the 1997 Census, from which projections were made for the following year. Where Census data was found to be underestimated, indirect indicators such as sectoral imports were used. Data not covered by the Census was sought from government agencies.

Employment in Argentina was estimated using the 1994 Census, the latest available, and an attempt was made to compare this data with the previous Census, for 1985. The 1994 Census presented some problems with the calculation of employment numbers, estimated to correspond to less than half of the nation's workforce in the year in question. The problems derive from exclusion of agricultural and governmental activities as well as the informal sector. Thus the data tended to underestimate the participation of copyright industries in job creation.

In Brazil employment was estimated at the four-digit level, i.e. covering all legally constituted firms with more than 30 employees in the case of industry, and more than 20 employees for commerce and services. The database used was IBGE's Central Company Registry (Registro Central de Empresas), supplemented by statistics from annual performance surveys for the sectors involved. This option entailed underestimation of the workforce in copyright industries.

In Chile employment was estimated using the 1992 Census. Despite the considerable time lag, the quality of the data can be considered acceptable because no significant changes in employment structures occurred in the 1990s in Chile.

Estimation of employment in Paraguay again faced problems with availability of statistics and disaggregation. The latest available data was from the 1992 Census, covering only 30 of the 68 classes of copyright-related activities. This again entailed underestimation.

Uruguay used the 1997 Census, supplemented by statistics from government agencies not covered by the Census.

Computations for trade did not present significant problems in connection with specific countries, except in the case of Paraguay, which as already noted is strongly affected by informal imports and exports.

At the end of the study a second seminar was held to validate the results. At this meeting, which took place in Montevideo on September 13-14, 2001, the main findings from the five country studies were presented and discussed. The participants were the general coordinators of the project and country coordinators, plus those present at the Campinas seminar, representatives of WIPO, national copyright offices and of writers', artists' and media associations. The seminar produced a set of suggestions for the final report to be written by the general coordinators.

The strategy of working meetings proved appropriate and effective. Many of the problems faced by country teams in the course of their investigations had been detected previously at the Campinas seminar. Thus the utilization of alternative data collection methods and sources was always determined by the need to assure comparability of the information derived from the data. In addition, the general coordinators maintained constant contact with the country teams with a view to harmonizing the treatment of information.

The seminar at which the five country studies were presented enabled the general project coordinators to extract elements of a general nature shared by the various countries, not least thanks to the contributions of government representatives and international experts. Much of the information presented was contested and revised. The criticisms were incorporated into the final report (Buainain et al., 2001).

5. KEY FINDINGS

The contribution of copyright industries to national value added is similar in Argentina, Brazil and Uruguay. It was 6.6% in 1993 in Argentina, 6.7% in 1998

in Brazil, and about 6% in 1997 in Uruguay. It is important to note that in Argentina the significance of copyright industries was probably underestimated in distribution, since it was impossible to separate a number of relevant activities such as communications services, not part of the copyright industries according to the definition used here. This resulted in a smaller relative share for cultural industries, estimated to account for 4.1% of gross value added. In Chile and Paraguay the contribution of copyright industries was smaller (2% in Chile and 1% in Paraguay). The difference may have been partly due to the difficulty of obtaining data.

Country	Value Added	
	US\$ 000	% GDP Mercosur
Argentina	6,440,000	0.59
Brazil	53,034,026	4.82
Chile	1,243,000	0.11
Paraguay	98,654	0.01
Uruguay	705,000	0.06
Copyright Industries in Mercosur	61,520,680	5.59
MERCOSUR	1,100,644,816	100

Source: Country studies

The aggregate values show sharp variations from country to country, reflecting the significant differences between their economies. The contribution of copyright industries to GDP in Argentina and Brazil is larger than the total GDP of Uruguay, Paraguay and Chile.

With regard to the contributions of specific segments and sub-segments, it is clear that in Argentina, Brazil, Chile and Uruguay the core copyright industries account for approximately 40% of value added. The distribution segment ranges from 40% (Argentina) to 57% (Uruguay). The importance of distribution as a share of aggregate value added points to the relative weakness of the production of copyrighted goods, as reflected in the trade balance for each country.

Country	People Employed	
	Thousands	% GDP Mercosur
Argentina	267	0.6
Brazil	1,326	2.8
Chile	149	0.3
Paraguay	56	0.1
Uruguay	46	0.1
Copyright Industries in Mercosur	1,844	3.8
MERCOSUR	48,112	100

Source: Country studies

The share of employment attributable to the copyright industries is significant in all five countries, ranging from 3% to 5%. In Argentina, roughly half a million

people worked in some activity directly or indirectly relating to the copyright industry in 1993. In Brazil the number was more than 1 million in 1998. The number was 150,000 in Chile in 1998 and at least 60,000 in Uruguay in 1997.

A relevant point in connection with Paraguay is the importance of the unauthorized market (piracy). Reproduction and distribution of unauthorized material may possibly employ a significant number of people not included in official statistics.

Country	Trade Flow					
	Exports (a)		Imports (b)		Balance (a) - (b)	
	US\$ million	%	US\$ million	%	US\$ million	%
Argentina	214.4	0.26	2,828.0	3.00	-2,613.6	18.30
Brazil	410.8	0.50	1,226.4	1.28	-815.6	5.71
Chile	213.8	0.26	1,735.9	1.81	-1,522.1	10.66
Paraguay	3.0	0.00	214.1	0.22	-211.1	1.48
Uruguay	21.4	0.03	356.3	0.37	-334.9	2.25
Copyright Industries in Mercosur	863.4	1.06	6,360.7	6.65	-5,497.3	38.49
TOTAL MERCOSUR	81,433.0	100	95,714.0	100	-14,281.0	100

Source: Country Studies

All the Mercosur countries and Chile show trade deficits in the copyright sector. The share of these goods and services in total trade flows varies from one country to another. Distribution is again important in this sphere, as are the equipment and media used in consumption of copyrighted goods.

6. CONCLUSIONS

Two groups of conclusions are pertinent. One consists of considerations regarding the methodology used in the study. The other consists of the conceptual findings on the copyright industry suggested by the results of the study.

The methodology used in the study has a number of advantages. First, it is based on a conception of copyright industries that goes beyond the terrain of artistic and cultural activities to which most studies have hitherto been confined. In addition, it allows for greater flexibility in terms of data sources (annual surveys of sectoral performance and economic censuses). It also reorganizes the categories or classes into which copyright-related economic activities are often divided, based on the extent to which the production of copyrighted material is a core activity or, alternatively, complementary activities such as user equipment, technical support or distribution are involved. Economic measurement based on value added for each class of activity in each group permits comparison between groups and with other sectors of the economy. The methodology also allows measurement to be made with a minimum time lag because it does not entail exclusive reliance on census data but creates an information base that can be updated annually. Lastly, it provides for adaptation of estimates to the availability of data and controlled overestimation or underestimation of computed values (e.g. if a country does not have statistics

only on a specific activity to be included, data at a higher level of aggregation can be used even though it will knowingly lead to overestimation).

The following general drawbacks of the methodology are worth mentioning. It is insufficient to capture technological dynamism and the dynamics of the various components of the copyright industries. The regrouping of activities neither reflects nor results in valid analytical categories for an analysis of the copyright industries' performance: for example, each segment (core, distribution etc.) includes branches that differ considerably from each other and are also driven by different variables. Another drawback is that the lack of annual statistics on sectoral performance incurs the risk of having only economic censuses as a source of data and there are usually long gaps between these censuses. This entails the need for projections, extrapolations or estimates of value added and employment based on possibly outdated information.

The advantages and drawbacks of the methodology presented by the project coordinators were experienced in the country studies. The process of identifying classes of activities comprised in the copyright economy was fairly homogeneous. However, some countries such as Argentina and Uruguay were restricted to census data, leading to a certain time lag. This required estimation of values for specific years so that country results could be compared. In the case of Brazil, the option was to use sectoral performance statistics. Because one of the sectors (services) did not have data on value added for the selected classes at a four-digit level, it was necessary to use projections based on the information available at a low level of disaggregation.

Regarding the findings of the study, it is worth highlighting the fact that the study proves the economic significance of copyright-related activities in terms of value added, job creation and export potential, given the growth in global and regional trade in copyright-related goods and services. Thus the study points to a real link between copyright and economic development.

Copyright-related activities are clearly knowledge-intensive, with multiple links upstream and downstream in the chain, as well as having intrinsic cultural value. These are relevant characteristics for developing countries inasmuch as they enhance the value of creative work even more than capital invested. The fact that the countries in question all have large trade deficits in copyright-related activities shows that there are opportunities to extend both job creation and cultural affirmation.

The distribution of copyright-related goods and services was shown to be significant and in need of a favorable institutional framework, given its large contribution to value added by the copyright industries overall. Moreover, distribution is the central element of competition in this sector. This factor is not always taken into account by policy measures designed to foster cultural production, leading to loss of efficiency and effectiveness.

Finally, it is worth stressing the importance of creating links between copyright-related activities and segments in developing countries, especially Mercosur plus Chile. Examples include the cultural and tourism industries. It is also important to bring about complementarity in the industries of Mercosur and Chile so as to meet regional demand, keeping imports as much as possible within the economic bloc represented by those countries. To this end it will be indispensable for policymakers to become much more aware of copyright-related activities.

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