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INITIAL SURVEY OF THE CONTRIBUTION OF THE COPYRIGHT INDUSTRIES TO ECONOMIC DEVELOPMENT

BY

INTERNATIONAL INTELLECTUAL PROPERTY ALLIANCE (IIPA)

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"We should not see the observance and enforcement of IP rights as merely protecting the interests of the developed world, but rather as a powerful tool to galvanize our domestic industry while retaining national culture, national inventiveness, and national creativity".[1]

- Betty Mould-Iddrisu, Chief State Attorney, International Law Division, Ministry of Justice, Ghana

OVERVIEW:

Copyright protection serves the important goals of fostering economic development, increasing cultural diversity, and moving all countries toward greater participation in an increasingly technology-driven world. The general consensus among economists and scholars is that enhanced copyright protection leads to positive economic growth. The statistical evidence suggests that economies with stronger copyright protection experience a greater contribution to GDP from those sectors.

SECTION ONE: SURVEY OF ACADEMIC LITERATURE

Over the past 15 to 20 years, economists and scholars have increasingly focused their attention on intellectual property rights ("IPRs") and the effects they have on enhancing economic development. Although the question is a difficult and multifaceted one, the general consensus is that protection for IPRs, including copyright protection, contributes to positive economic development. Keith Maskus, Edwin Mansfield, Carlos Primo Braga and others have demonstrated that enforceable IPR regimes increase overall economic welfare. While these studies have tended to focus on patents primarily, protection of copyrights, with lower costs of entry generally and greater domestic creation of copyrighted, as contrasted with patented products, in developing countries, also have been found to enhance economic welfare. An adequate and effective copyright regime creates jobs in developing countries, creates taxable income for the governments of those countries, and compels foreign investment by assuring protection for the investors' intellectual property.

[1] Betty Mould-Iddrisu, *Introduction to Intellectual Property Rights: A Developing Country's Perspective*, (July 25, 2003), *available at* http://usinfo.state.gov/products/pubs/intelprp/perspect.htm.

Maskus

Keith Maskus argues with convincing evidence that strengthened IPRs increase economic growth.[2] Maskus notes that copyright protected products have extremely high investment costs but very low copying costs, and points out the detrimental effects of a regime that would allow piracy:

> If other members of society were allowed to free ride on works without compensating their creators, the incentives to create would be severely dampened. Static economic efficiency might be achieved, but at the cost of lower growth in cultural identity and reduced investment in 'industrially useful' expressions such as software.[3]

Maskus offers statistical evidence of increased international trade in goods protected by intellectual property rights in both developed and developing countries. In particular, Maskus presents data which show overall increases in trade in printed material and sound recordings,[4] in a study covering the EU, the United States, Japan, Canada, Australia, Mexico, Brazil, China, South Korea, Malaysia, Indonesia, Thailand, and India. According to Maskus, between 1990 and 1996, total trade in these sectors for each country grew substantially.[5] Maskus shows similar growth for IPR-sensitive services using data on trade in computer services as well as royalties and licensing fees.[6] Again, using figures from 1990 to 1996, receipt of royalties and licensing fees for IPR-sensitive services in South Korea grew from US $37 million in 1990 to US $168 million in 1996,[7] while payment of royalties and licensing fees leapt from US $136 million in 1990 to US $ 2.2 billion in 1996.[8] According to Maskus, these figures suggest "[t]hat rapid growth is associated with rising technology imports."[9] It should be noted that these figures' growth coincided with substantially increased enforcement in South Korea against software piracy in 1996.[10]

Maskus also makes the point that IPRs strengthen as economic development increases: "As incomes rise, the demand for higher-quality, differentiated products also rises, leading to growing preferences for protection of trademarks and copyrights or, in political economy terms, an increase in the supply of IPRs. As an economy's technological sophistication increases, inventors and creators require stronger protection for their works; thus demand for IPRs rises."[11] Importantly, he notes that "causation may flow both ways, with stronger property rights also contributing to growth in incomes."[12] In his section on Foreign Direct Investment ("FDI"), Maskus makes clear that developing countries with weak IPR regimes suffer from restricted trade, and suggests that adherence to TRIPS "bears the potential to raise. . . imports of technologically sophisticated goods [including computer software] by significant amounts."[13]

Maskus concludes that IPRs provide a framework for more complex business structures, usually at every level of economic development.[14] He qualifies this by noting that "the function of IPRs as

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[2] Keith E. Maskus, INTELLECTUAL PROPERTY RIGHTS IN THE GLOBAL ECONOMY x (2000).
[3] *Id.* at 45-46.
[4] *Id.* at 77.
[5] *Id.* at 79.
[6] *Id.*
[7] *Id.* at 80.
[8] *Id.*
[9] *Id.* at 81.
[10] IIPA, 1997 Special 301 Recommendations, 154 (1997).
[11] Maskus, *supra* note 2, at 102.
[12] *Id.*
[13] *Id.* at 141.
[14] *Id*. at 145.

appropriate support mechanisms varies with income and technological capabilities."[15] Using both Lebanon and China as examples, Maskus makes the point that domestic copyright industries are hampered by inadequate copyright protection. In a survey in Lebanon, that country's film and television industry made clear their belief that stronger copyright protection would give them the ability to successfully export their product to neighboring countries.[16]

In a new book published in 2005 by the World Bank and Oxford University Press and co-authored with Carston Fink, another prominent economist, Maskus further argues that stronger copyright protection in Lebanon would have a beneficial effect on the domestic software industry:

> . . . it is evident that Lebanon has a strong and entrepreneurial set of programmers with businesses that are well positioned to export to Middle Eastern markets. This fact is likely to attract additional technology-sharing agreements and joint ventures with foreign software firms, particularly if additional regional integration and harmonization of copyright law and enforcement takes place.[17]

Maskus also makes this point with respect to other copyright industries: ". . . some dynamic gains could be induced by stronger and more harmonized copyright protection in the Middle East. Lebanon is well positioned as a regional net exporter of television programming and broadcasts, cinematic films, and music."[18]

In his earlier book, INTELLECTUAL PROPERTY RIGHTS IN THE GLOBAL ECONOMY, Maskus notes that in China "the domestic software industry has grown rapidly in particular business applications that do not suffer much copying, but has faced obstacles in developing larger and more fundamental program platforms."[19] He compares this with India, whose thriving domestic film industry many observers credit to that country's better enforcement of copyright.[20]

Maskus also offers support that Foreign Direct Investment ("FDI") is fostered by strengthened intellectual property rights. He cites a 1998 study by Borensztein, De Gregorio, and Lee which found that "inward flows of FDI from industrial countries to 69 developing countries over the period 1970-89 contributed positively to growth of the recipient nations, more powerfully than did domestic investment,"[21] and offers evidence that FDI reacts positively to stronger IPRs in developing countries.[22]

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[15] *Id.*
[16] *Id.* at 149.
[17] Keith Maskus, *Strengthening Intellectual Property Rights in Lebanon*, *in* INTELLECTUAL PROPERTY AND DEVELOPMENT: LESSONS FROM RECENT ECONOMIC RESEARCH 283 (Carsten Fink & Keith E. Maskus, eds. 2005).
[18] *Id*. at 288.
[19] Maskus, *supra* note 2, at 149.
[20] *Id*. Maskus, Sean M. Dougherty, and Andrew Mertha make a similar argument in a recent article on China likewise collected in the World Bank book: "IPRs are effective devices for handling particular market failures associated with cultural creation and invention and technology use. These market failures become more acute as economies grow, meaning that the need for effective patents, trademarks, trade secrets protection, and copyrights increases over time. China has made significant progress on the legislative end but continues to experience severe enforcement problems." *Intellectual Property Rights and Economic Development in China*, *in* INTELLECTUAL PROPERTY AND DEVELOPMENT: LESSONS FROM RECENT ECONOMIC RESEARCH 325-26 (Carsten Fink & Keith E. Maskus, eds. 2005).
[21] Maskus, *supra* note 2, at 153 (citing Bornsztein, E., J. De Gregoria, and J.-W. Lee, *How Does Foreign Direct Investment Affect Economic Growth?*, 45 JOURNAL OF INTERNATIONAL ECONOMICS 115-35 (1998)).
[22] *Id.* at 154 (citing Keith Maskus, *The International Regulation of Intellectual Property*, 134 WELTWIRTSCHAFTLICHES ARCHIV 186-208 (1998)).

The strong suggestion is that strengthened IPRs contribute to positive economic growth by creating more attractive FDI opportunities for foreign investors and thus create a spill-over which leads to greater domestic economic growth. Maskus identifies four implications of this dynamic. First, weaker IPR regimes tend to isolate countries from technological advances, including computer software advances protected by copyright. Secondly, those countries with weaker protection of IPRs receive fewer spillover benefits that new technologies would bring. Third, the technologies that are available to such countries tend to be out of date. Finally, and perhaps most importantly, countries with weak IPRs provide almost no incentive to their people to create or innovate, nor do they attract new technological investment.[23]

In summary, Maskus' book makes the convincing argument that strengthened IPRs, including copyright, not only provide a framework for increasingly complicated business transactions, but also provide strong incentives for FDI which is vital to grow a domestic economy. Finally, and perhaps most importantly, strengthened IPRs provide the impetus for local creativity, increasing not only economic, but cultural, welfare.

In a separate contribution to the World Bank book, Maskus reiterates the importance of IPRs for creating incentives for FDI and technology transfer: "[s]een in their proper policy context, IPRs are an important component of the general regulatory system, including taxes, investment regulations, production incentives, trade policies, and competition rules."[24] As for their effects on cross-border trade, Maskus makes the point that "[o]verall, empirical evidence indicates that, other things being equal, countries that have stronger IPR regimes do attract more imports, although the effect varies across industries."[25]

Furthermore, Maskus speculates that strengthened IPRs will attract investment in different sectors. For example, industries where the costs of imitation or copying are high will be relatively uninterested in strong IPR protection. Conversely, "[f]irms with products and technologies that can easily be copied, such as. . . software, are more concerned with the ability of the local IPR system to deter imitation."[26]

Incentives for licensing technology or other information based assets is even more closely tied to the relative strength of IPRs than FDI.[27] According to Maskus, "[a]s IPRs improve, licensing costs should fall, because it becomes easier to discipline licensees against revelation or appropriation of proprietary technology and against misuse of trademark. Thus, for a given level of complexity of innovations, we would expect to see licensing displace FDI as IPRs are strengthened."[28]

Smarzynska Javorcik

A recent (2005) study by Beata Smarzynska Javorcik of the World Bank comes to very similar conclusions to those of Maskus. Smarzynska Javorcik's study looks at the composition of foreign direct investment in Eastern Europe and the former Soviet Union, as opposed to the "aggregate FDI flows" that

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[23] *Id.* at 155.
[24] Keith E. Maskus, *The Role of Intellectual Property Rights in Encouraging Foreign Direct Investment and Technology Transfer*, *in* INTELLECTUAL PROPERTY AND DEVELOPMENT: LESSONS FROM RECENT ECONOMIC RESEARCH 54 (Carsten Fink & Keith Maskus eds., 2005).
[25] *Id*. at 55 (citing Keith E. Maskus & Mohan Penubarti, *How Trade Related Are Intellectual Property Rights?*, 39 JOURNAL OF INTERNATIONAL ECONOMICS 227-48 (1995)).
[26] Maskus, *supra* note 24, at 56.
[27] *See id*. at 56, 60.
[28] *Id*. at 60.

marked earlier studies.[29] Smarzynska Javorcik concludes that weak IPR protection acts as a deterrent for investors.[30] Furthermore, "[t]here is also some evidence that weak IPR protection may discourage all investors, not just those in the sensitive sectors."[31] Finally, Smarzynska Javorcik finds that where there is a "lack of IPR protection," investors are discouraged "from undertaking local production and encourag[ed]. . . to focus on distribution of imported products."[32] As with the general statement about IPR protection, "this effect is present in all sectors, not only those relying heavily on IPR protection."[33]

Primo Braga, Fink, and Sepulveda

The findings of Carlos A. Primo Braga, Carsten Fink, and Claudia Paz Sepulveda, not coincidentally, also come to similar conclusions as those of Maskus. Their World Bank Discussion Paper, *Intellectual Property Rights and Economic Development*, argues that creating a framework for enhanced intellectual property protection will benefit developing countries. This framework should be "one that facilitates access of local entrepreneurs to the IPRs system and that adopts a pro-competitive approach to intellectual property."[34] Primo Braga, Fink and Sepulveda address the oft-heard argument that enhancing IPRs in developing countries creates an incentive for abusive price discrimination by the right-holders. In the context of copyright for computer software, they argue that this is not the case. The higher prices for software in developing countries is instead just a reflection of the low volumes sold in those countries. As copyright protection increases, software manufacturers have the incentive to distribute greater volumes of their product at lower prices as the market for that product increases.[35] Thus, increased copyright protection actually lowers the cost of legitimate product.

Mansfield and Benko

The economist Edwin Mansfield has done considerable work on the subject of technology's contribution to economic growth. Though mostly in the context of patent law, the economic theories hold for other types of intellectual property as well. Mansfield offers evidence showing that economic growth in industrialized countries is largely dependent on technological change. The social rates of return on investments in technology are often very high, while the private rates of return for the innovator are considerably lower.[36] IPR protection afforded by the patent system provides a way for inventors to get back some of the benefits to society at large that would not be theirs were there no patent system at all.[37] Mansfield's findings indicate that the existence of the patent system is thought to be crucial for innovation in both the chemical and drug industries.[38] In a follow-up to Mansfield's paper, Robert P. Benko applied the analysis to copyright, noting that "[o]ne survey of executives in the U.S. motion picture and television, prerecorded entertainment, publishing, and advertising industries conducted by CBS in 1984 found

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[29] Beata Smazrzynska Javorcik, *The Composition of Foreign Direct Investment and Protection of Intellectual Property Rights: Evidence from Transition Economies, in* INTELLECTUAL PROPERTY AND DEVELOPMENT: LESSONS FROM RECENT ECONOMIC RESEARCH 159 (Carsten Fink & Keith Maskus, eds. 2005).
[30] *See id.* at 134.
[31] *Id.* at 159.
[32] *Id.*
[33] *Id.*
[34] Carlos A. Primo Braga, Carsten Fink, Claudia Paz Sepulveda, *Intellectual Property Rights and Economic Development*, World Bank Discussion Paper No. 412 (2000).
[35] *Id.* at 33-34.
[36] Edwin Mansfield, *Intellectual Property Rights, Technological Change, and Economic Growth, Intellectual Property Rights and Capital Formation in the Next Decade* (1988).
[37] *Id.* at 12.
[38] *Id.* at 13.

copyright infringement to be the most frequently mentioned barrier to trade."[39] This phenomenon suggests that, just as in the patent context, copyright protection provides incentives to invest in and trade in copyrighted material, thus expanding economic growth.

Barfield and Groombridge

A study by Claude E. Barfield and Mark A. Groombridge (which concluded that in most cases copyright owner control over the parallel importation of copyrighted works promotes competition and diversity and is critical to promoting new investment by copyright owners) noted the overwhelming consensus by economists that "creativity and technological progress are the central factors behind economic growth."[40] They went on to summarize studies which show the contribution of the copyright industries to economic growth, pointing to the software industry as a prime example:

> the computer software industry is transforming major sectors, most significantly in banking, retail and health care. Over the last several years, commercial banks have increased productivity by over 10 percent annually, and new computer software has revolutionized the burgeoning health care industry by allowing for huge efficiency gains in patient record keeping, medical history, diagnosis, treatment and insurance reimbursement.[41]

Further, they make the compelling point that the kinds of economic growth the United States has seen as a result of the contribution of the copyright industries, will go to any country that institutes a strong intellectual property regime.[42]

Conclusion

The general consensus of the academic literature is that stronger copyright protection contributes to positive economic growth. This is arguably the case regardless of a country's level of development. Strong intellectual property rights provide incentives for local creators to bring the products of their mind to their local markets. By doing so, they help to lay the groundwork, in their countries, for strong economic growth the likes of which have been seen in countries which have effective regimes for IPR protection.

SECTION TWO: COPYRIGHT AND ECONOMIC DEVELOPMENT STATISTICS: SURVEY OF EXISTING STUDIES ON THE ECONOMIC IMPORTANCE OF COPYRIGHT

Several countries have compiled and published statistics showing the contribution that copyright industries make to the local economies. Most of these are modeled on the work that the International Intellectual Property Alliance (IIPA), in association with Economists Inc., have done over the years. In this part, we will survey the studies which come from the United States, the EU, Canada, Japan, Australia, and a number of developing countries, like Brazil and India. These studies show that the copyright

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[39] Robert P. Benko, *Intellectual Property Rights and New Technologies, Intellectual Property Rights and Capital Formation in the Next Decade*, 30 (1988) (citing CBS, Trade Barriers to U.S. Motion Picture and Television, Prerecorded Entertainment, Publishing, and Advertising Industries (1984)).
[40] Claude E. Barfield and Mark A. Groombridge, *The Economic Case for Copyright Owner Control over Parallel Imports*, 1 JOURNAL OF WORLD INTELLECTUAL PROPERTY 904 (1998).
[41] *Id.*
[42] *Id.*

industries generally account for 3-6% of overall economies, with growth and employment numbers similar to those in the U.S. While most of the studies are in developed countries (with the exception of India, the Mercosur countries, Latvia and Chile), this Part will seek to make the case that the statistics in developing countries do not, and likely will not, differ significantly from those in developed countries.

In the United States, the core copyright industries play a substantial role in the overall economy. The industry includes those that create and distribute copyrighted material, including newspapers, periodicals, books, television programs, films, recorded music, and business and entertainment software. In 2002, for example, the core copyright industries accounted for 6% of GDP or $626 billion. Between 1997 and 2002, the share of GDP for the copyright industries grew at a rate of 46.3% more than the remainder of the economy, an estimated compound annual growth rate of 3.51% vs. 2.4%. Employment in the copyright industries is 4.0% of total US employment, accounting for 5.5 million workers. Between 1997 and 2002 employment in this sector grew at a rate of 27% higher than the annual employment growth rate of the economy as a whole: 1.33% vs. 1.05%. Foreign sales and exports of the core copyright industries continue to be substantial. In 2002, they accounted for $89.26 billion, larger than nearly every industry sector, including the automobile and agricultural sectors.[43]

In the European Union, the copyright industries accounted for 3.99% of GDP in 2000. In the employment sector, the copyright industries account for 2.02% of the total employment. [44] A recent report just completed in an EU accession country – Latvia – and using the new WIPO methodology discussed below, shows similar contributions by the copyright sector to GDP and employment. In 2000, the core copyright industries in Latvia accounted for 2.9% of the GDP (or €228 million, representing 2 1/2 times the value to GDP contributed by the manufacture of textiles and textile importing and 8 times that contributed by the manufacture of machinery and equipment). That same year, the core copyright industries accounted for 3.7% of Latvia's total employees (7 times the transportation equipment manufacturing industry and 9 times more than the meat production industry).[45] These surprising statistics, developed in accordance with WIPO's new methodology, may prove helpful throughout the region in

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[43] Stephen E. Siwek, *Copyright Industries in the U.S. Economy: The 2004 Report*, prepared for the International Intellectual Property Alliance, iii-vi (2004).

[44] Media Group, Business Research and Development Centre Turku School of Economics and Business Administration, The Contribution of Copyright and Related Rights to the European Economy, Based on Data from the Year 2000 by (Final Report October 20, 2003).

Austria (2.3% GDP and 2.1% employment)
Belgium (2.7% GDP and 2.4% employment)
Denmark (3.7% GDP and 4.2% employment)
Finland (3.2% GDP and 4.3% employment)
France (3.4% GDP and 1.9% employment)
Germany (3.5% GDP and 1.3% employment)
Greece (1.3% GDP and 1.5% employment)
Ireland (2.1% GDP and 2.8% employment)
Italy (3.3% GDP and 1.3% employment)
Luxembourg (2.8% GDP and 3.0% employment)
Netherlands (4.0% GDP and 2.1% employment)
Portugal (1.9% GDP and 1.9% employment)
Spain (2.9% GDP and 1.1% employment)
Sweden (4.4% GDP and 2.7% employment)
United Kingdom (7.1% GDP and 3.2% employment)

[45] *See* Ministry of Culture of the Republic of Latvia & the Central Statistical Bureau of Latvia, The Economic Contributions of Copyright-Based Industries in Latvia: 2000 5, 15 (2004).

demonstrating the importance of copyright industries and copyright protection to economic and cultural development.

In Canada, the contribution to GDP of the copyright industries in 2000 was estimated at US $41.4 billion or 7.4%. The value of the copyright industries increased by 6.6% between 1992 and 2000, twice that of the rest of the economy. In 2002, the Canadian copyright industries represent the third most valuable contributor to Canada's economic growth.[46]

In 1998, the Japanese core copyright industries reached roughly US $235 billion in total value, representing 2.3% of the Japanese GDP.[47] This is significant growth from 1.9% of GDP in 1994 in a country not often cited as strong in the copyright area. The average growth rate of 5.9% between 1994 and 1998 is only slightly less than the 6.2% growth rate of the telecommunications industry, which the Japanese consider "as being at the center of industrial innovation in the 21st century."[48] This strongly suggests that core copyright industries are a substantial component of the economic growth of large, developed countries like Japan. Furthermore, the authors of the study noted that "the survey's quantitative assessments indicate that copyright is of critical importance to the national life as viewed not only from a purely cultural perspective but also from an industrial one."[49]

The Australian copyright industries account for a similarly substantial share of that country's economy. In 1999, the copyright industries accounted for 3.3% of GDP or US $10.2 billion. Between 1996 and 2000, the share of GDP grew faster than the remainder of the economy: 5.7% vs. 4.85%. In 2000, employment in the Australian copyright industries accounted for 3.8% of the total Australian workforce, roughly 345,000 people. That number is up from the 312,000 people employed in the Australian copyright industries in 1995-96. The difference represents a growth rate of 2.7%; higher than the overall Australian employment growth rate of 2%.[50] Though Australia was a net importer of copyrighted goods during the period between 1995-96 and 1999-2000, revenue from exports in the core copyright industries increased by 44%; value from imports increased by 29%.[51]

In New Zealand the copyright industries in 2001 made up 3.1% of total GDP or US $1.5 billion, growing faster from 1997 than the economy as a whole.[52] As well, the copyright industries employ 3.6% of New Zealand's total work force.[53]

In Singapore employment in the creative industries was 47,000 (2.2% of total employment), with an additional 34,000 persons employed in distribution industries. Total employment within the industry was 81,000 or 3.9% of total employment in 2000. The sector with the highest value-added and employment was the IT sector, which accounted for 38% of value-added and 31% of employment. For 2000 (latest data available), the creative industries contributed a total value-added (VA) of US $2.98

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[46] Industry Canada, Copyright Act-Section 92 Report, Supporting Culture and Innovation: Report on the Provisions and Operation of the *Copyright Act*, i (2002).
[47] Japan Copyright Institute, Copyright White Paper: A View From the Perspective of Copyright Industries, 9 (2001).
[48] *Id*. at 12.
[49] *Id*.
[50] Australian Copyright Council and Centre for Copyright Studies, The Economic Contribution of Australia's Copyright Industries, prepared by The Allen Consulting Group, ii-iii (2001).
[51] *Id*. at iv.
[52] NZ Institute of Economic Research, Inc., Creative Industries in New Zealand: Economic Contribution, Report to Industry New Zealand, 21 (2002).
[53] *Id*. at iii.

billion, or about 1.9% of GDP. Distribution industries associated with these core creative industries added a further US $2.02 billion, bringing the total VA of the copyright industries to US $5.00 billion, or 3.2% of GDP.[54]

In Hong Kong, the creative industries contributed over HK$46 billion to the local economy in 2001, accounting for 3.8% of GDP. There were over 30,000 establishments engaging 170,000 persons in 2002. Despite the general economic downturn, there had been a real increase in the number of establishments (about 22%) and people employed in these sectors (11%) over the period 1996-2002.[55]

In Taiwan, the cultural industries had a total value of NT $570 billion (US $16.8 billion) or 5.9% of GDP in 2000. The sector employed 337,456 workers representing 2.6% of total employment, increasing from employment of 245,412 persons in 1998. From 1998 to 2000, the industry experienced growth of 10.2%.[56]

No comprehensive study has been done in South Korea to date. However, the four major cultural industry sectors of movie, music, broadcasting, and game are forecast to grow at an average rate of 22.8%, exceeding the growth rate of the whole economy of 6%. One interesting feature of the South Korean cultural industry is the contribution of the animation sector which is estimated to be worth US $300 million commanding about 0.4% of the world's animation market. There are some 200 companies in this sector employing some 15,000 persons. The character, game and music industries are estimated to have a market size of US $3.8 billion, US $3.2 billion and US $340 million respectively.

Some developing countries, including India and certain countries in Latin America, have also contributed reports on the contribution of their copyright industries to economic development. These reports use similar formats to those used in the other countries surveyed and tend to find results consistent with the other studies. In a singular advance in this area, and in recognition of the importance of countries knowing the role of the copyright industries in their own economies, in 2003 WIPO published the *Guide on Surveying the Economic Contribution of the Copyright-Based Industries.*[57] The methodology developed in this Guide was first used in the recent U.S. study described above and was also used in the Latvian study. A study is now ongoing in Hungary and is about to commence in Russia. Widespread use of the WIPO methodology will permit even better comparisons among countries at various levels of development.

In 1995, Indian copyright industries accounted for 5.06% of that country's GDP. This can be accounted for by the fact that India's book publishing, film and music industries are among the largest in Asia. The Indian book publishing industry is among the largest in the world in terms of volume, turning out 57,400 titles in 1997. The Indian film industry makes roughly 800 films a year, contributing significantly to the local economy. India is also an enormous producer and consumer of recorded music. In 1997, the total unit sales reached nearly 412 million. The growth of the Indian software industry is likewise staggering. Between 1990 and 1997, the industry grew more than 50%. Exports in this area have grown from US $225 million in 1992-93 to US $1.7 billion in 1997-98. The domestic software

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[54] Singapore Department of Statistics (2002), An Overview of the Copyright Industries in Singapore, Singapore Department of Statistics. http://www.mita.gov.sg/MTI%20Creative%20Industries.pdf.
[55] Dr Hui and the Centre for Cultural Policy Research, Baseline Study on Hong Kong's Creative Industries. http://www.info.gov.hk/cpu/english/papers/baseline%20study(eng).pdf
[56] Taiwan Institute of Economics Research commissioned by The Council of Cultural Affairs
[57] *See* WIPO, *Guide on Surveying the Economic Contribution of the Copyright-Based Industries* (2003), *available at* http://www.wipo.int/copyright/en/publications/pdf/copyright_pub_893.pdf.

industry grew from US $490 million in 1995-96 to US $1.25 billion in 1998-99.[58] The example of India suggests that strong copyright protection leads to positive economic growth. The statistics on domestic production of copyrighted material, books, films, music, and software, further strengthens the position that stronger copyright protections nurture local creativity and innovation, increasing not only economic welfare, but cultural welfare as well.

In a preliminary examination of the contribution of the copyright industries to the economy of Mexico reveals percentages comparable to those found in a number of other countries. In 1998, the year for which this data was gathered, the copyright industries accounted for 6.7% of Mexico's GDP.[59] Furthermore, in 1998, the copyright industries employed roughly 1.5 million people, representing 3.66% of the total workforce in Mexico in that year.[60]

In Argentina, Brazil, and Uruguay, the copyright industries' contribution to GDP is roughly the same. In 1993, the most recent year for available figures in Argentina, the copyright industries accounted for 6.6% of GDP or US $6.4 billion. In Brazil, figures for 1998 reveal that the copyright industries represented 6.7% of GDP or US $53 billion. In Uruguay, the copyright industries accounted for 6% of GDP in 1997, or US $705 million. In Chile the contribution is smaller, accounting for 2% of GDP or US $1.2 billion. Likewise in Paraguay, the contribution is smaller, accounting for 1% of GDP or US $98 million.[61] Employment in the copyright industries is comparable to that found in the other surveyed countries. In Argentina, the copyright industries employ 508,000 people, or 5.3% of the total workforce. In Brazil, 1.3 million people work in the copyright industries, accounting for 5% of that country's total employment. Chile's copyright industries employ 149,000 workers or 2.7% of total employment. Paraguay's copyright industries employed 51,000 people in 1992 or 3.3% of the total workforce. Finally, in Uruguay, the copyright industries account for 46,000 workers, or 4.9% of total employment.[62]

CONCLUSION

Strong copyright protection has been shown in numerous studies to be the key engine in the growth of many countries' economies the world over. It also can stimulate greater diversity in cultural expression, and can foster technological and economic growth that can literally narrow the divide between economies now operating at vastly different levels of development. As the many economists who have studied these issues have all generally agreed, strong copyright protection enhances economic growth, which has positive net benefits for developing economies, including importantly, attracting foreign direct investment. Economic studies conducted on a country-by-country basis have noted that countries which have recently strengthened protection and enforcement for copyright have seen a marked increase in contribution to GDP from the copyright industries.

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[58] Shahid Alikhan, Socio-Economic Benefits of Intellectual Property Protection in Developing Countries 61-63 (2000).
[59] *See* Ernesto, Piedras, The Value of Culture: Economic Contribution of Industries Protected by Copy Rights (IPCRs) in Mexico (Sept. 30, 2004).
[60] *See id.*
[61] UNICAMP & WIPO, Estudio Sobre La Importancia Económica de las Industria y Actividades Protegidas por el Derecho de Autor y los Derechos Conexos en los Países de Mercosur y Chile 4, 38 (2002).
[62] *Id.*, at 100, 120, 171, 201, 254.