

**THE WINNERS AND THE LOSERS: THE
AGREEMENT ON TRADE-RELATED ASPECTS
OF INTELLECTUAL PROPERTY RIGHTS AND
ITS EFFECTS ON DEVELOPING COUNTRIES**

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I. INTRODUCTION

These are changing times in the global economy. With the opening of the international market and the increased ease with which goods, capital, and ideas flow around the world, new opportunities for industrialization and economic growth have emerged for developing countries.¹ However, these rapid economic changes have not come without problems. The competitiveness of firms in developed countries² is largely determined by the ability to develop, commercialize, and, most importantly, to capture the economic benefits from technological innovations.³ In recent years, these industries have experienced an increase in the number of infringement cases regarding protected corporate technology.⁴ These industries have pushed for the strengthening of global protection on intellectual property rights because violations of protected intellectual property rights cost manufacturers and companies billions of dollars in lost revenue each year. For instance, the value of pirated

¹ Developing countries are defined as countries whose economies lag behind those of the advanced industrialized nations. PAUL R. KRUGMAN & MAURICE OBSTFELD, *INTERNATIONAL ECONOMICS: THEORY AND POLICY* 240 (2d ed. 1991). Nations that fall within the heading of developing countries include South Korea and Ethiopia. *Id.* The underlying characteristic shared by developing countries is that they are attempting to catch up with the advanced industrialized countries by pursuing trade policies favoring manufacturing. *Id.*

² Developed countries are those countries where manufacturing and technology account for a large percentage of the economy. *See* KRUGMAN & OBSTFELD, *supra* note 1, at 240–41. Developed countries include the United States, Western Europe, and Japan. *Id.* at 240.

³ *See id.* at 240–41.

⁴ *See generally* *Oakley Raids Counterfeit Factories in China and South Africa; Seizes Over 200,000 Pairs of Sunglasses*, BUSINESS WIRE, Nov. 15, 1999 (showing that Oakley researches, develops, and produces premium sunglasses that are sold to consumers in over seventy countries. During the fiscal year of September 30, 1998 to September 30, 1999, Oakley generated \$245 million in revenues and \$42 million in operating income. Like other manufacturers, Oakley is plagued with the problem of counterfeits. As a result of successful raids at three Chinese factories and two South African distributors who were engaged in the production and distribution of counterfeit Oakley sunglasses, Oakley seized over 200,000 pairs of finished and semi-finished counterfeit Oakley sunglasses and sunglass parts. The counterfeit Oakley glasses were to be sold in markets in Colombia, Venezuela, and New York City.); *see also* *Kuwaiti Authorities Raid 19 Pirate Shops*, EMERGING MARKETS DATAFILE, THE STAR, July 1, 1999, (noting that Kuwaiti authorities seized more than \$1 million worth of illegal software when they raided shops in Kuwait. The illegal software included programs from Adobe, Autodesk, Novell, Symantec, Microsoft, and Sakhr Software.).

goods in China was \$2.3 billion in 1996 and \$2.8 billion in 1997.⁵ Governments have not only strengthened their own national laws protecting intellectual property rights, but they have also entered into international agreements in an attempt to create an international system of protection for intellectual property rights. In 1994, as part of the Uruguay Round of negotiations and agreements, the Trade-Related Aspects of Intellectual Property Rights (“TRIPs Agreement”) was adopted in Marrakesh, Morocco.⁶ This comprehensive law governing the global protection of intellectual property rights provides the protection that industries and developed countries have been seeking. However, the TRIPs Agreement simultaneously narrows the developing countries’ access to technology, discouraging the rapid diffusion of new technology needed for economic growth.

The goal of this comment is to explore the effects of the TRIPs Agreement on the industrialization and economic growth of developing countries. Part II of this comment provides an overview on the development of intellectual property rights in the world. In addition, this section will discuss international agreements on the protection of intellectual property rights, including past conventions and the TRIPs Agreement. In Part III, this comment studies the current economic situation in developing countries and explores policy tools for economic growth. This section, moreover, outlines the conflicting arguments surrounding the effects of the TRIPs Agreement on developing countries. Part IV analyzes the empirical evidence surrounding the effects of the TRIPs Agreement on foreign direct investment and international trade in developing countries.

⁵ Steven Mufson, *Piracy Still Runs Rampant In China; Yet Industries Oppose Asking for Sanctions*,

WASH. POST, Mar. 27, 1998, at E3.

⁶ Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, LEGAL INSTRUMENTS—RESULTS OF THE URUGUAY ROUND vol. 31, 33 I.L.M. 1197 (1994) [hereinafter TRIPs Agreement]; see also *Implications of Uruguay Round Patent Moves*, MARKETLETTER, May 30, 1994, available at 1994 WL 2620598 [hereinafter *Implications of Uruguay Round*].

II. OVERVIEW OF INTELLECTUAL PROPERTY RIGHTS AND THE TRIPS AGREEMENT

A. Overview of Intellectual Property Rights

1. Definition of Intellectual Property Rights

Intellectual property rights are defined as governmental protection of private innovations and creativity.⁷ Intellectual property law protects “original ideas, creative forms of expression, new discoveries, inventions, and trade secrets.”⁸ The basic forms of intellectual property rights generally include patents, copyrights, trademarks, and trade secrets.⁹ Each form of intellectual property has its own standards and procedures, which establish the subject matters protected, the application process involved in achieving protection, the duration of protection, and the remedies for infringement.¹⁰ However, the fundamental feature of these various forms of intellectual property rights is the exclusive right to exclude others from certain activities.¹¹

Traditionally, laws governing the protection of intellectual property rights extend only to the national boundaries of the nation where the inventor has filed for protection.¹² Recently,

⁷ See ROBERT M. SHERWOOD, *INTELLECTUAL PROPERTY AND ECONOMIC DEVELOPMENT* 11–13 (1990) [hereinafter *INTELLECTUAL PROPERTY AND ECONOMIC DEVELOPMENT*].

⁸ See Gabriel Garcia, *Economic Development and the Course of Intellectual Property Protection in Mexico*, 27 *TEX. INT'L L.J.* 701, 707 (1992).

⁹ Patents are granted to inventors of novel inventions and give the inventor the right to exclude others from using and profiting from his or her invention. See *INTELLECTUAL PROPERTY AND ECONOMIC DEVELOPMENT*, *supra* note 7, at 12. Copyrights are the temporary right of an author or artist to have sole and exclusive privilege of multiplying copies of his or her work and publishing and selling them. See *id.* A trademark is a distinctive mark or word through which the products of a particular manufacturer may be distinguished from another. See *id.* Trade secrets are valuable commercial or industrial knowledge that a company attempts to keep others from knowing. See *id.*; see also RALPH H. FOLSOM, ET AL., *INTERNATIONAL BUSINESS TRANSACTIONS* 758–59 (4th ed. 1999) (noting that often, it is difficult to obtain legal rights to trade secrets).

¹⁰ See FOLSOM ET AL., *supra* note 9, at 758–66 (noting that the standards and procedures surrounding the protection of intellectual property differ from country to country).

¹¹ See *id.* (discussing legal protection of patents, copyrights, and trademarks, stating that unlike these protections, one cannot obtain exclusive legal rights to know-how).

¹² See Carlos A. Primo Braga & Carsten Fink, *The Relationship Between Intellectual Property Rights and Foreign Direct Investment*, 9 *DUKE J. COMP. & INT'L L.* 163, 166 (1998).

nations have attempted to expand the protection of intellectual property rights for their own nationals beyond the boundaries of the nation and into the international markets on a global scale.¹³ Two main reasons have prompted governments to enter these international agreements on the protection of intellectual property rights.¹⁴ First, as developing countries gradually increase their exports of industrial goods into markets originally dominated by industrialized countries, the industrialized countries must rely more heavily on their comparative advantage in the production of intellectual property.¹⁵ Second, the high cost of research and development combined with the vulnerability of high-tech knowledge to free-riders has forced companies to seek international protection of intellectual property rights.¹⁶

2. *The Origins of Intellectual Property Rights*

The public willingness to bestow private property rights to creative expressions, designs, and innovations can be traced back to ancient times.¹⁷ Copyright protection was first observed in the fifteenth century after the invention of the printing press.¹⁸ During the sixteenth and seventeenth centuries, it was common in most countries for the sovereign to grant exclusive publishing rights for a fee.¹⁹ Unauthorized publications were prohibited because they reduced the sovereign's revenues.²⁰ In 1710, the first statute recognizing the author as the primary recipient of copyright protection was passed in England.²¹ Subsequent court decisions in England confirmed the rights of authors to exclude others from publishing their works without permission as a common law right, rather than a statutory right.²² Many civil law countries during the eighteenth and nineteenth centuries

¹³ *See id.*

¹⁴ J.H. Reichman, *Universal Minimum Standards of Intellectual Property Protection Under the TRIPs Component of the WTO Agreement*, 29 INT'L LAW. 345, 346 (1995).

¹⁵ *Id.*

¹⁶ *See id.*

¹⁷ INTELLECTUAL PROPERTY AND ECONOMIC DEVELOPMENT, *supra* note 7, at 16-17.

¹⁸ *See id.* at 17.

¹⁹ *See id.* at 22.

²⁰ *Id.* at 23.

²¹ *See id.*

²² *Id.*

began enacting statutes, such as the 1793 French statute protecting the rights of authors.²³ In the United States, the Constitution contains a provision calling for federal copyright protection.²⁴

Trademarks evolved from the early practices of marking property to indicate ownership.²⁵ The practice of marking property appeared during the fifth and sixth centuries B.C. where Greek vases bore the marking of the potter.²⁶ Modern trademark protection started in the trade guilds where craftsmen were required to place production marks on their goods.²⁷ While an individual's mark on the goods served for identification purposes, the concept of trademark and unfair competition evolved from the premise that it was unfair to present one's goods as the goods of another.²⁸ Systematic legal protection of trademarks began to evolve in the early nineteenth century.²⁹ Courts in both the United States and England created the tort action of "passing off," where "the defendant had used plaintiff's mark to deceive consumers into thinking that plaintiff was the source of defendant's goods."³⁰ Eventually, courts began categorizing the stealing of another's mark as trademark infringement, rather than "passing off" or unfair competition cases.³¹ Today, the mark not only can be placed on goods, but also can serve to identify services, associations, and certifications.³²

Very little is known about the development of trade secrets because of the secrecy of the facts surrounding them.³³ The legal protection of trade secrets can be traced

²³ *See id.*

²⁴ U.S. CONST. art. I, § 8, cl. 8.

²⁵ *See* PAUL GOLDSTEIN, COPYRIGHT, PATENT, TRADEMARK, AND RELATED STATE DOCTRINE 219 (4th ed. 1999).

²⁶ *See id.*

²⁷ *See id.* (quoting the rules governing the trade guilds: "every craft . . . either had its own ordinances concerning such marks or administered statutory or municipal regulations of a similar nature . . . [The purpose for the marking] was to facilitate the tracing of 'false' or defective wares and the punishment of the offending craftsmen.").

²⁸ *See* INTELLECTUAL PROPERTY AND ECONOMIC DEVELOPMENT, *supra* note 7, at 17.

²⁹ GOLDSTEIN, *supra* note 25, at 219.

³⁰ *Id.*

³¹ *Id.*

³² INTELLECTUAL PROPERTY AND ECONOMIC DEVELOPMENT, *supra* note 7, at 17.

³³ *See id.* at 18.

back to early Roman times.³⁴ For instance, a master could bring a legal action and obtain a monetary remedy against a third party who enticed the master's slave to reveal the master's secrets.³⁵ During the Middle Ages in Europe, the craft guilds successfully provided protection for craft secrets by keeping the secrets of the method of production within the guilds.³⁶ In nineteenth century Britain, protection of trade secrets was provided through the apprenticeship system, where tricks of the trade were passed from the principal to the apprentice.³⁷ In Asia, family businesses and the sense of lifetime employment with a particular employer minimized the loss of secrets via employee turnover.³⁸ Today, international competition and the high cost of technological development have intensified the importance of trade secret protection.³⁹

During the Renaissance, the Italian states were among the first Western governments to grant patents.⁴⁰ For example, during the fifteenth century, the Venetians codified a general patent statute in order to spur the introduction of new technologies.⁴¹ The practice of granting patent rights eventually spread throughout Europe in the centuries that followed, where often royalty had the power to grant patents.⁴² In the seventeenth century, the English government adopted the Venetian model, whereby the English government, not the royalty, granted inventors

³⁴ *Id.* at 18–19; GOLDSTEIN, *supra* note 25, at 154 (noting that the Roman law of *actio servi corrupti* permitted a slave owner to receive double damages against a third person who maliciously enticed his slave to commit a wrong).

³⁵ INTELLECTUAL PROPERTY AND ECONOMIC DEVELOPMENT, *supra* note 7, at 19.

³⁶ *See id.*; *see also* GOLDSTEIN, *supra* note 25, at 154 (noting that craft guilds were created to protect trade secrets because there was a distaste for postemployment restraints).

³⁷ *See* INTELLECTUAL PROPERTY AND ECONOMIC DEVELOPMENT, *supra* note 7, at 19; *see also* GOLDSTEIN, *supra* note 25, at 154 (noting that controversy over the prolonged period of service, which does not pay much, has forced craftsmen to enter into craft guilds instead).

³⁸ INTELLECTUAL PROPERTY AND ECONOMIC DEVELOPMENT, *supra* note 7, at 19.

³⁹ *See id.*

⁴⁰ *Id.* at 24.

⁴¹ GOLDSTEIN, *supra* note 25, at 382 (noting that the government would award the patentees the exclusive right to their new patent for a specified period of time, approximately ten to fifty years).

⁴² *See* INTELLECTUAL PROPERTY AND ECONOMIC DEVELOPMENT, *supra* note 7, at 24.

limited monopolies on their inventions and ideas.⁴³ This English model became known as the Statute of Monopolies.⁴⁴ In the late eighteenth century, both France and the United States enacted comprehensive patent laws with the understanding that patent rights were individual rights, rather than a royal prerogative.⁴⁵ By the late nineteenth century, many countries around the world, including Japan, had adopted comprehensive patent statutes.⁴⁶ However, many former colonies, such as those of the British Empire, adopted less comprehensive patent systems.⁴⁷

B. International Agreement on Protection of Intellectual Property Rights

1. Past International Agreements on the Protection of Intellectual Property Rights

With the globalization of the economic market and the increase in international trade, industries in developed countries have experienced an increased number of infringements on intellectual property rights.⁴⁸ National intellectual property laws have been ineffective in combating problems associated with intellectual property rights infringement.⁴⁹ With the increase in trade, industries have

⁴³ See GOLDSTEIN, *supra* note 25, at 382 (noting that this statute was enacted to limit the otherwise generous grants of the Crown to only the “true and first inventor” of new inventions).

⁴⁴ See *id.*

⁴⁵ See INTELLECTUAL PROPERTY AND ECONOMIC DEVELOPMENT, *supra* note 7, at 24 (noting that the American colonies and, after the Revolution, the state legislatures adopted the English ad hoc system for awarding patents).

⁴⁶ See *id.*

⁴⁷ See *id.*

⁴⁸ See PETER NANYENYA-TAKIRAMBUDE, TECHNOLOGY TRANSFER AND INTERNATIONAL LAW 60–61 (Praeger Special Studies 1980).

⁴⁹ See *id.* at 71–72. Laws protecting intellectual property rights in developing countries are often formulated to favor the developing countries and hurt the industries transferring technology into the countries. See *id.* For instance, the intellectual property law in Argentina requires the approval of all agreements relating to the licensing of patents, trademarks, designs, and know-how. *Id.* at 71. The legislation outlines the circumstances under which registration of an agreement will be refused. *Id.* “The features and circumstances that are deemed objectionable include: price-fixing, tying, grant-back, production-limitation, and export-prohibition clauses; the fact that the imported technology is of a level available in Argentina; and the fact that the price or royalty is disproportionate to the value transferred.” *Id.* at 71–72. Similarly, Brazilian law governing intellectual property is drawn to protect against abuses of “economic power.” See *id.* at 72. The law strictly prohibits the

begun to lobby for an international system of protection for intellectual property rights. During the past century, nations attempting to harmonize intellectual property rights have entered into a number of international agreements.⁵⁰ Even though each of these international agreements have covered different types of intellectual property rights and have varied in terms of their objectives, the “ultimate goal has been movement towards internationally recognized and enforceable intellectual property rights.”⁵¹

The two most important multilateral agreements providing international protection for intellectual property rights are the Paris Convention for the Protection of Industrial Property,⁵² which protects against trademark and patent infringement, and the Berne Convention for the Protection of Literary and Artistic Works,⁵³ which protects against copyright infringement.⁵⁴ The Paris Convention for the Protection of Industrial Property (“Paris Convention”), signed on March 20, 1883, is one of the oldest international agreements on the protection of intellectual property rights.⁵⁵ Signatories to the Paris Convention include the United States, the United Kingdom, Mexico, and over 100 other countries.⁵⁶ The objective of the Paris Convention is to

following: tying clauses; restrictions on the “commercialization” of the products covered by the license; limitations on the exportation of licensed products; grant-back clauses; royalty clauses on patents which are not granted in Brazil, granted to a nonresident patentee or corporation which issues an application for which no convention priority has been claimed. *Id.*

⁵⁰ See Robert J. Pechman, *Seeking Multilateral Protection for Intellectual Property: The United States “TRIPs” Over Special 301*, 7 MINN. J. GLOBAL TRADE 179, 180–81 (1998); see also Bernard Hoekman, *Services and Intellectual Property Rights*, in THE NEW GATT: IMPLICATIONS FOR THE UNITED STATES 85, 100 (Susan M. Collins & Barry P. Bosworth eds., 1994) (noting that international protection of intellectual property was not a completely new concept, but a concept that has been discussed among nations for many years).

⁵¹ Pechman, *supra* note 50, at 180–81.

⁵² See generally Paris Convention for the Protection of Industrial Property, Mar. 20, 1883, as last revised at Stockholm, July 14, 1967, 21 U.S.T. 1583, 828 U.N.T.S. 305 [hereinafter Paris Convention].

⁵³ See generally Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1886, as last revised at Paris, July 24, 1971, 828 U.N.T.S. 221 (as amended) [hereinafter Berne Convention].

⁵⁴ Dana Williamson, *Addressing Inadequate Intellectual Property Protection in the Uruguay Round*, BUS. AM, Sept. 25, 1989, at 4.

⁵⁵ Frank Romano, *Global Trademark and Copyright 1998: Protecting Intellectual Property Rights in the International Marketplace*, in INTERNATIONAL CONVENTIONS AND TREATIES, 545, 557 (Practicing Law Institute, 1998).

⁵⁶ See FOLSOM ET AL., *supra* note 9, at 761; see also Contracting Parties or Signatories to Treaties Administered by WIPO; *Members of the WIPO Governing*

provide “protection of industrial property The protection of industrial property has as its object patents, utility models, industrial designs, trademarks, service marks, trade names, indications of source or appellations of origin, and the repression of unfair competition.”⁵⁷ The Paris Convention grants national treatment of industrial property within member nations; whereby, member nations have to treat its own citizens and citizens of other member nations similarly under its national law protecting intellectual property rights.⁵⁸ The Paris Convention, however, contains two major loopholes. First, members of the Paris Convention are not required to abide by any substantive standards of patent protection.⁵⁹ As a result, a member nation has the individual choice to provide as little or as much intellectual property protection as it decides, so long as it treats both domestic and foreign claimants similarly under its national intellectual property law.⁶⁰ Second, under the Paris Convention, disputes between member nations are to be settled by the International Court of Justice (“ICJ”).⁶¹ Many member nations, however, do not recognize the ICJ and believe it has

Bodies and Committees, Paris Convention for the Protection of Industrial Property, available at <http://www.wipo.int/treaties/index.html> (last visited Oct. 27, 2000).

⁵⁷ Paris Convention, *supra* note 52, art. 1.

⁵⁸ See Paris Convention, *supra* note 52, art. 2 (quoting the Paris Convention, art. 2:

(1) Nationals of any country of the Union shall, as regards the protection of industrial property, enjoy in all the other countries of the Union the advantages that their respective laws now grant, or may hereafter grant, to nationals; all without prejudice to the rights specially provided for by his Convention. Consequently, they shall have the same protection as the latter, and the same legal remedy against any infringement of their rights, provided that the conditions and formalities imposed upon nationals are complied with. (2) However, no requirement as to domicile or establishment in the country where protection is claimed may be imposed upon nationals of countries of the Union for the enjoyment of any industrial property rights).

⁵⁹ Pechman, *supra* note 50, at 182; see generally Paris Convention, *supra* note 52 (noting the absence of minimum standards of protection for intellectual property).

⁶⁰ Pechman, *supra* note 50, at 182; see also Romano, *supra* note 55, at 557 (outlining the fact that the Paris Convention does not require a member state to provide intellectual property protection to foreigners if the member state does not provide similar protection to its own citizens); see generally Paris Convention, *supra* note 52, art. 2(1).

⁶¹ Paris Convention, *supra* note 52, art. 28; see also Pechman, *supra* note 50, at 182.

no jurisdiction within their countries.⁶² Furthermore, ICJ rulings are often ignored, even by member nations that recognize its jurisdiction, leaving the disputing party without a legal remedy for infringements.⁶³

The Berne Convention for the Protection of Literary and Artistic Works (“Berne Convention”), signed on September 9, 1886 and effective on December 5, 1887, was the first multilateral copyright treaty.⁶⁴ The Berne Convention strives to provide protection for literary, scientific, and artistic works.⁶⁵ The Berne Convention has at least 121 signatories, including the United States, France, Mexico, and the United Kingdom.⁶⁶ Like the Paris Convention, the Berne Convention sets forth national treatment, providing that “[p]rotection in the country of origin is governed by domestic law. However, when the author is not a national of the country of origin of the work for which he is protected under this Convention, he shall enjoy in that country the same rights as national authors.”⁶⁷ Unlike the Paris Convention, the Berne Convention includes a minimum standard of protection, whereby exclusive rights must be granted to an individual for

⁶² Pechman, *supra* note 50, at 182.

⁶³ *See id.*

⁶⁴ Romano, *supra* note 55, at 552; *see also* Berne Convention, *supra* note 53.

⁶⁵ Berne Convention, *supra* note 53, arts. 1–2 (defining “literary and artistic works” as including:

every production in the literary, scientific and artistic domain, whatever may be the mode or form of its expression, such as books, pamphlets and other writings; lectures, addresses, sermons and other works of the same nature; dramatic or dramatico-musical works; choreographic works and entertainment in dumb show; musical compositions with or without words; cinematographic works to which are assimilated works expressed by a process analogous to cinematography; works of drawing, painting, architecture, sculpture, engraving and lithography; photographic works to which are assimilated works expressed by a process analogous to photography; works of applied art; illustrations, maps, plans, sketches and three-dimensional works relative to geography, topography, architecture or science)

see also Romano, *supra* note 55, at 552 (noting that the treaty provides for the protection of literary, scientific, and artistic works).

⁶⁶ *See* Contracting Parties or Signatories to Treaties Administered by WIPO; Members of the WIPO Governing Bodies and Committees, *Berne Convention for the Protection of Literary and Artistic Works*, at <http://www.wipo.int/treaties/ip/berne/index.html> (last visited Oct. 27, 2000); *see also* Romano, *supra* note 55, at 552.

⁶⁷ Berne Convention, *supra* note 53, art. 5.

his or her work over a duration of time.⁶⁸ The Berne Convention, however, fails to outline clear legal remedies by which copyright holders may enforce their rights against infringers.⁶⁹ Specifically, there are no provisions within the Berne Convention that provide for sanctions against member states that do not uphold their obligations under the convention.⁷⁰ Moreover, under the Berne Convention, producers of sound recordings have neither protection nor legal remedies against infringement.⁷¹

Established in 1967 under the WIPO convention, the World Intellectual Property Organization (“WIPO”) is an intergovernmental organization with headquarters in Geneva, Switzerland.⁷² The objective of the WIPO is “the promotion of the protection of intellectual property throughout the world through cooperation among States, and for the administration of various multilateral treaties dealing with the legal and administrative aspects of intellectual property.”⁷³ As one of the sixteen specialized divisions of the United Nations,⁷⁴ the WIPO is responsible for the administration and enforcement of the Paris Convention and

⁶⁸ See Romano, *supra* note 55, at 553; see generally Berne Convention, *supra* note 53, arts. 5–18 (explaining that the Berne Convention sets forth the standards governing individual intellectual property rights, such as the right to performance, the right to broadcast, the right to public performance, and the right to authorship).

⁶⁹ Romano, *supra* note 55, at 553; see generally Berne Convention, *supra* note 53.

⁷⁰ Romano, *supra* note 55, at 553.

⁷¹ See *id.*

⁷² *What is WIPO?*, at http://www.wipo.int/about_wipo/en/overview.html (last visited Oct. 27, 2000); see also World Intellectual Property Organization, *The Beginning*, at http://www.wipo.int/about_wipo/en/gib.htm (last visited Oct. 27, 2000) (explaining that the Paris Convention and Berne Convention originally had their own International Bureau to carry out administrative tasks. In 1893, the bureaus overseeing the Berne Convention and the Paris Convention combined and formed an international organization called the United International Bureaux for the Protection of Intellectual Property (“BIRPI”). As the importance of intellectual property grew, BIRPI moved from Berne, Switzerland to Geneva to be closer to the United Nations. Ten years later, following the entry into force of the Convention Establishing the World Intellectual Property Organization, BIRPI became WIPO. Later, in 1974, WIPO became a specialized agency of the United Nations system of organizations.); Romano, *supra* note 55, at 554.

⁷³ *What is WIPO?*, *supra* note 72; see also Convention Establishing the World Intellectual Property Organization, July 14, 1967, 21 U.S.T. 1770, 1772–73, 828 U.N.T.S. 3, 11, 13 [hereinafter WIPO Convention].

⁷⁴ *What is WIPO?*, *supra* note 72.

the Berne Convention.⁷⁵ The infrastructure of the WIPO is divided into two major divisions—industrial property and copyright.⁷⁶ A substantial part of the activities and resources of the WIPO are devoted to the establishment of world-wide intellectual property protection by promoting cooperation among nations and facilitating the transfer of technology from developed countries to developing countries.⁷⁷ As of August 2000, there were over 171 countries that were members of the WIPO, including the United States, Argentina, Brazil, Mexico, the United Kingdom, and Japan.⁷⁸ The WIPO, however, has its share of weaknesses.⁷⁹ The WIPO has both a weak enforcement mechanism and a weak dispute settlement mechanism.⁸⁰ The WIPO is unable to sanction violators and the provisions covering legal remedies are vague.⁸¹ The WIPO dispute settlement mechanism has been

⁷⁵ See *Texts of Treaties Administered by WIPO*, at <http://www.wipo.int/treaties/index.html> (last visited Oct. 27, 2000) (noting that the WIPO administers other treaties such as the Rome Convention, 1961 International Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organisations; the Madrid Agreement Concerning the International Registration of Marks of April 14, 1891; the Treaty on Intellectual Property in Respect of Integrated Circuits; the Vienna Agreement Establishing an International Classification of the Figurative Elements of Marks; and The Hague Agreement Concerning the International Deposit of Industrial Designs of November 6, 1925).

⁷⁶ See *What is WIPO?*, *supra* note 72.

⁷⁷ See *id.*; see also Romano, *supra* note 55, at 554; see also WIPO Convention, *supra* note 73, at 21 U.S.T. at 1772, 828 U.N.T.S. at 11 (promoting the “protection of intellectual property throughout the world through cooperation among States and, where appropriate, in collaboration with any other international organization”).

⁷⁸ See World Intellectual Property Organization, *Member States*, at <http://www.wipo.int/members/index.html> (last visited Oct. 27, 2000).

⁷⁹ See Romano, *supra* note 55, at 554–55.

⁸⁰ See Pechman, *supra* note 50, at 182–83; see also Romano, *supra* note 55, at 554.

⁸¹ See Romano, *supra* note 55, at 554; see generally WIPO Convention, *supra* note 73, 21 U.S.T. at 1772–73, 828 U.N.T.S. at 11, 13 (quoting Article 4 of the WIPO Convention covering the functions of WIPO:

In order to attain the objectives described in Article 3, the Organization, through its appropriate organs, and subject to the competence of each of the Unions: (i) shall promote the development of measures designed to facilitate the efficient protection of intellectual property throughout the world and to harmonize national legislation in this field; (ii) shall perform the administrative tasks of the Paris Union, the Special Unions established in relation with that Union, and the Berne Union; (iii) may agree to assume, or participate in, the administration of any other international agreement designed to promote the protection of intellectual property; (iv) shall encourage the

called “effectively worthless” because it relies on the voluntary cooperation of the party receiving the unfavorable ruling in enforcing a dispute resolution.⁸² In an attempt to give the WIPO more power in enforcing the Berne and Paris Conventions, the United States and other developed countries have attempted to change and improve the provisions governing the enforcement and dispute mechanism.⁸³ They wanted to give the WIPO more specific tools for legal enforcement, such as the ability to impose sanctions.⁸⁴ Many developing countries, however, argued that WIPO had too much power in administering the Berne and Paris Conventions.⁸⁵ Because the WIPO is dominated by “U.N.-style voting blocs,” the result has been a stalemate; therefore, no changes have been made to the WIPO’s ability to enforce the provisions set forth in the Conventions.⁸⁶ In summary, the multilateral attempt to protect industries and individuals globally against infringement on their intellectual property rights have largely failed because the Paris Convention, the Berne Convention, and the WIPO do not offer a comprehensive and effective international system of protection against infringements on intellectual property rights.

2. *The TRIPs Agreement*

Due to the inadequacy of the Paris and Berne Conventions in protecting against infringement of intellectual

conclusion of international agreements designed to promote the protection of intellectual property; (v) shall offer its cooperation to States requesting legal-technical assistance in the field of intellectual property; (vi) shall assemble and disseminate information concerning the protection of intellectual property, carry out and promote studies in this field, and publish the results of such studies; (vii) shall maintain services facilitating the international protection of intellectual property and, where appropriate, provide for registration in this field and the publication of the data concerning the registrations)

see also Rebecca F. Martin, *Part I. The WIPO Performances and Phonograms Treaty: Will the U.S. Whistle a New Tune?*, 44 COPYRIGHT SOC’Y U.S.A. 157, 185 (1997).

⁸² See Pechman, *supra* note 50, at 182–83 (citing Monique Corday, *GATT v. WIPO*, 76 J. PAT. & TRADEMARK OFF. SOC’Y 121, 122 (1994)).

⁸³ See Romano, *supra* note 55, at 555; see also Susan A. Mort, *The WTO, WIPO & the Internet: Confounding the Borders of Copyright and Neighboring Rights*, 8 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 173, 180–81 (1997).

⁸⁴ See Romano, *supra* note 55, at 554–55.

⁸⁵ See *id.* at 555.

⁸⁶ See *id.*

property rights, the United States, Japan, and the European Community pushed for international protection of intellectual property rights to be added to the agenda of the Uruguay Round of General Agreement on Tariffs and Trade (“GATT”) in 1994.⁸⁷ GATT earlier addressed the issue of protection for intellectual property rights in 1979 during the Tokyo Round of GATT.⁸⁸ At the Tokyo Round, however, the member nations rejected the Anti-Counterfeit Code, which would have addressed trademark counterfeiting.⁸⁹ On April 15, 1994 as part of the negotiations and agreements of the Uruguay Round of GATT, the Trade-Related Aspects of Intellectual Property Rights (“TRIPs Agreement”) was adopted in Marrakesh, Morocco.⁹⁰ The TRIPs Agreement did not actually become effective until January 1, 1995.⁹¹ Because the TRIPs Agreement is categorized as a multilateral agreement under the WTO, any country that wishes to join the WTO must also agree to abide by the TRIPs Agreement.⁹² Currently, there are 138 countries participating in the WTO and the TRIPs

⁸⁷ See *id.* at 562; see also Williamson, *supra* note 54 (discussing that the United States pushed for the GATT TRIPs negotiations because of the inadequate intellectual property protection provided by existing international agreements such as the Berne and Paris Conventions); see also Pechman, *supra* note 50, at 183 (noting that economic incentives were the reasons behind the United States push for the development of an international intellectual property rights agreement).

⁸⁸ See Romano, *supra* note 55, at 562.

⁸⁹ *Id.*; see also Williamson, *supra* note 54 (noting that the United States supported the rejection of the counterfeiting measure, but now views a comprehensive approach as essential); see also Hoekman, *supra* note 50, at 101 (highlighting that during the Tokyo Round, the European Community and the United States drafted an agreement to protect against counterfeit goods entering their countries).

⁹⁰ *Implications of Uruguay Round*, *supra* note 6; see generally TRIPs Agreement, *supra* note 6.

⁹¹ World Trade Organization, *An Overview of the Agreement on Trade-Related Aspects of Intellectual Property Rights*, at http://www.wto.org/english/tratop_e/trips_e/intel2_e.htm (last visited Aug. 25, 2000) [hereinafter *Overview*].

⁹² World Trade Organization, *Frequently Asked Questions About TRIPs in the WTO*, at http://www.wto.org/english/tratop_e/trips_e/tripfq_e.htm (last visited Oct. 27, 2000). On January 1, 1995, the GATT, as an international agency, was permanently replaced by the World Trade Organization. World Trade Organization, *Contracting Parties to the GATT*, at http://www.wto.org/english/thewto_e/acc_e/gattmen_e.htm (last visited Sept. 14, 2000).

Agreement.⁹³ Current signatories include the United States, Japan, Mexico, the United Kingdom, and France.⁹⁴

The purpose of the TRIPs Agreement is to provide adequate and effective protection for intellectual property rights in order to reduce impediments to international trade and promote global competition.⁹⁵ As listed in Part II, Sections 1 through 8, the TRIPs Agreement covers eight forms of intellectual property, including: copyright and related rights; trademarks; geographical indications; industrial design; patents; layout-designs of integrated circuits; confidential information or trade secrets; and contractual licenses.⁹⁶

The TRIPs Agreement is not considered a new concept in international law, rather it supplements the existing international agreements governing the protection of intellectual property rights on a global scale.⁹⁷ The TRIPs Agreement outlines the minimum standards of substantive protections for each form of intellectual property that each member nation must provide in their national law.⁹⁸ Member nations then have the freedom to determine the appropriate method of implementing the TRIPs Agreement within their own legal system.⁹⁹

⁹³ World Trade Organization, *The Organization Members and Observers*, at http://www.wto.org/english/thewto_e/whatis_e/tif_e/org6_e.htm (last visited Oct. 27, 2000).

⁹⁴ World Trade Organization, *The Organization Members*, *supra* note 100, at http://www.wto.org/english/thewto_e/whatis_e/tif_e/org6_e.htm (noting that currently, China, Vietnam, and the Russian Federation are not members of the WTO, but are just observers).

⁹⁵ See TRIPs Agreement, *supra* note 6, opening statement (stating that the objectives of TRIPs are “to reduce distortions and impediments to international trade, and taking into account the need to promote effective and adequate protection of intellectual property rights, and to ensure that measures and procedures to enforce intellectual property rights do not themselves become barriers to legitimate trade.”); Rochelle Cooper Dreyfuss & Andreas F. Lowenfeld, *Two Achievements of the Uruguay Round: Putting TRIPs and Dispute Settlement Together*, 37 VA. J. INT’L L. 275, 280 (1997).

⁹⁶ See generally TRIPs Agreement, *supra* note 6, arts. 9–40.

⁹⁷ See Michael J. O’Sullivan, *International Copyright: Protection for Copyright Holders in the Internet Age*, 13 N.Y. INT’L L. REV. 1, 13 (2000) (noting that TRIPs incorporated the substantive rights of the Berne, Rome, and Paris Conventions, while creating new measures of enforcement).

⁹⁸ *Implications of Uruguay Round*, *supra* note 6; see generally TRIPs Agreement, *supra* note 6.

⁹⁹ *Implications of Uruguay Round*, *supra* note 6; see also TRIPs Agreement, *supra* note 6, art. 1; see also Ruth Gana, *Prospects for Developing Countries Under the TRIPs Agreement*, 29 VAND. J. TRANSNAT’L L. 735, 757 (1996) (pointing out that the reason permitting individual nations to enact their own national

The TRIPs Agreement is divided into three main sections—standards, enforcement, and dispute settlement.¹⁰⁰ Parts I and II of the TRIPs Agreement highlight the substantive standards of intellectual property protection and outline the agreement's three core commitments—minimum standards, national treatment, and most-favored nation treatment.¹⁰¹ The section on minimum standards defines the subject matter to be protected, the intellectual property rights conferred, and the minimum duration of protection.¹⁰² While the minimum substantive standards in the Agreement are partially based on the principles and provisions set forth in the Berne and Paris Conventions,¹⁰³ the TRIPs Agreement adds a substantial number of additional obligations on matters where the other conventions are either silent or are seen as inadequate.¹⁰⁴ The national treatment provisions of the WIPO govern the TRIPs Agreement, where “[e]ach Member shall accord to the nationals of other Members treatment no less favourable than it accords to its own nationals with regard to the protection of intellectual property. . . .”¹⁰⁵ The

intellectual property laws to meet the TRIPs Agreement was the problems which arose if one attempts to import intellectual property laws from a developed country to an undeveloped country. Developing countries whose intellectual property laws are already behind are unable to immediately align their current intellectual property laws with developed countries' intellectual property laws without great hardships).

¹⁰⁰ See TRIPs Agreement, *supra* note 6, table of contents.

¹⁰¹ See Pechman, *supra* note 50, at 185; see also Dreyfuss & Lowenfeld, *supra* note 95, at 279 (pointing out that the concept of minimum standards was adopted from the Paris and Berne Conventions).

¹⁰² See generally TRIPs Agreement, *supra* note 6 (noting that Article I provides the standards for the categories of intellectual property covered by the Agreement); see also *Overview*, *supra* note 91 (pointing out the aspects that are covered by minimum standards).

¹⁰³ See Dreyfuss & Lowenfeld, *supra* note 95, at 279; see also TRIPs Agreement, *supra* note 6, art. 1 (stating that “[m]embers shall accord the treatment provided for in this Agreement to the nationals of other Members. In respect of the relevant intellectual property right, the nationals of other Members shall be understood as those natural or legal persons that would meet the criteria for eligibility for protection provided for in the Paris Convention (1967), the Berne Convention (1971) . . . were all Members of the WTO members of those conventions.”).

¹⁰⁴ Adrian Otten & Hannu Wager, *Compliance with TRIPs: The Emerging World View*, 29 VAND. J. TRANSNAT'L L. 391, 397 (1996); see generally TRIPs Agreement, *supra* note 6, arts. 9–40 (noting that the agreement adds more specific standards protecting computer programs, databases, sound recordings, and pharmaceutical and agricultural chemical companies).

idea of national treatment flows into the concept of most-favored nation (“MFN”). Article 4 of Part I states “[w]ith regard to the protection of intellectual property, any advantage, favour, privilege or immunity granted by a Member to the nationals of any other country shall be accorded immediately and unconditionally to the nationals of all other Members.”¹⁰⁶

Part III of the TRIPs Agreement sets forth general obligations governing the enforcement procedures for the protection of intellectual property rights.¹⁰⁷ The TRIPs Agreement uses both internal and external enforcement mechanisms.¹⁰⁸ The internal enforcement mechanism primarily concerns private actions by requiring member countries to ensure that enforcement procedures, as specified in the Agreement, are made available under national laws.¹⁰⁹ Section 2 of Part III of the TRIPs Agreement, entitled Civil and Administrative Procedures and Remedies, outlines the standards of evidence, injunctions, damages, and other remedies required under national law.¹¹⁰ External enforcement mechanisms permit the use of trade sanctions to force compliance with the TRIPs Agreement.¹¹¹ The success of using trade sanctions to enforce compliance will depend on the legitimacy of the WTO dispute resolution process.¹¹²

¹⁰⁵ TRIPs Agreement, *supra* note 6, art. 3; *see also* Pechman, *supra* 50, at 185; *see also* Reichman, *supra* note 14, at 347–48 (highlighting national treatment applies to all member nations and is one of the fundamental principles of the TRIPs Agreement).

¹⁰⁶ TRIPs Agreement, *supra* note 6, art. 4.

¹⁰⁷ TRIPs Agreement, *supra* note 6, art. 41 (quoting Article 41 of the TRIPs agreement that:

[m]embers shall ensure that enforcement procedures as specified in this Part are available under their law so as to permit effective action against any act of infringement of intellectual property rights covered by this Agreement, including expeditious remedies to prevent infringements and remedies which constitute a deterrent to further infringements. These procedures shall be applied in such a manner as to avoid the creation of barriers to legitimate trade and to provide for safeguards against their abuse).

¹⁰⁸ Gana, *supra* note 99, at 769.

¹⁰⁹ *Id.*; *see also* TRIPs Agreement, *supra* note 6, art. 41 (noting the national enforcement provision provides that members shall ensure that enforcement procedures against intellectual property violations are available under their laws).

¹¹⁰ TRIPs Agreement, *supra* note 6, arts. 42–49.

¹¹¹ Gana, *supra* note 99, at 769.

¹¹² *Id.*

Unlike the Berne and Paris Convention, the TRIPs Agreement adopted the detailed Dispute Settlement Understanding (“DSU”), established by the WTO.¹¹³ Unlike the old DSU system, the new DSU mechanism¹¹⁴ guarantees a right to adopt the dispute panel’s decision unless there is a consensus to reject the panel’s decision.¹¹⁵ Appellate review

¹¹³ See Pechman, *supra* note 50, at 187; see also TRIPs Agreement, *supra* note 6, art. 64 (quoting Article 64 which states that “[t]he provisions of Articles XXII and XXIII of GATT 1994 as elaborated and applied by the Dispute Settlement Understanding shall apply to consultations and the settlement of disputes under this Agreement except as otherwise specifically provided herein.”).

¹¹⁴ The WTO provides a unified system for settling international trade disputes through the dispute settlement understanding mechanism (“DSU”) and the dispute settlement body (“DSB”). See Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations, Apr. 15, 1994, LEGAL INSTRUMENTS—RESULTS OF THE URUGUAY ROUND vol. 1 (1994), Annex 2, 33 I.L.M. 1125, 1226 (1994) [hereinafter Final Act]. There are five stages in the resolution of disputes under the WTO: 1) consultation; 2) panel establishment, investigation, and report; 3) appellate review of the panel report; 4) adoption of the panel and appellate review decision; and 5) implementation of the decision adopted. In the consultation phase, any WTO member who believes the measures of another member are not in conformity with the covered agreements may call for consultation on those measures. Final Act Annex 2 art. 4. The respondent has ten days to reply to the call for consultations and must agree to enter into consultation within thirty days. Final Act Annex 2 art. 4. Once consultation begins, the parties have sixty days to achieve settlement. Final Act Annex 2 art. 4. If the consultations fail, the party seeking the consultations may request the DSB to establish a panel to investigate, report, and resolve the dispute. Final Act Annex 2 art. 4. The panel is not comprised of citizens from either party. Final Act Annex 2 art. 8. The panel receives pleadings, rebuttals, and hears oral arguments. Final Act Annex 2 arts. 12, 15. Appellate review of panel reports is available at the request of any party. Final Act Annex 2 art. 16. The appellate body can only review the panel reports on questions of law or legal interpretations. Final Act Annex 2 art. 17. The panel decision may be upheld, modified, or reversed by the appellate body decision. Final Act Annex 2 art. 17. Appellate body determinations are submitted to the DSB. Final Act Annex 2 art. 16. Panel decisions that are not appealed are also submitted to DSB. Final Act Annex 2 art. 16. The DSB must adopt them at its next meeting unless the decision is rejected by all members of the DSB. Final Act Annex 2 art. 17. Implementation is a three step process. The member found to have a measure which violates its WTO obligations has a reasonable time to bring the measure into conformity with WTO obligations. Final Act Annex 2 art. 21. If the measure is not brought into conformity, the parties negotiate to reach an agreement upon a form of compensation. Final Act Annex 2 art. 22. If the parties cannot agree on an appropriate amount of compensation within twenty days, the party injured by the violating measure seeks authority from the DSB to retaliate against the other party whose measures violate WTO obligations. Final Act Annex 2 art. 22.

¹¹⁵ *Id.* at 1235; see also Pechman, *supra* note 50, at 187–88 (noting that the DSU has evolved over the last fifty years under GATT. The old DSU system originally stated that a panel’s decision is enforceable only by consensus. Thus,

of the dispute panel's decision on the violation is also guaranteed.¹¹⁶ The offending member must then either change the inconsistent measure or negotiate a compensatory settlement by a set deadline.¹¹⁷ If the offending member fails to change the inconsistent measure or compensate the injured party, the WTO may choose to retaliate by withholding trade benefits in the same sector.¹¹⁸

Articles 65 and 66 of Part VI of the TRIPs Agreement contain the transitional arrangements.¹¹⁹ Developed countries have had to comply with all the provisions of the TRIPs agreement since January 1, 1996.¹²⁰ Developing countries and countries in transition from a centrally-planned economy to a market economy had until January 1, 2000 to comply with all requirements of the Agreement—with the exception of previously uncovered patent protection, where the deadline is January 1, 2005.¹²¹ Less developed countries ("LDCs")¹²² have until January 1, 2006 to completely conform to the Agreement.¹²³ Although developing

the offending member was able to block the enforcement of the panel's final decision.).

¹¹⁶ Final Act Annex 2 art. 17.

¹¹⁷ Final Act Annex 2 art. 22; *see also* Pechman, *supra* note 50, at 188.

¹¹⁸ Final Act Annex 2 art. 22.

¹¹⁹ TRIPs Agreement, *supra* note 6, arts. 65–66.

¹²⁰ *See* TRIPs Agreement, *supra* note 6, art. 65 (stating that no Member is required to apply the provisions of the Agreement before the expiration of a one year period following the date of entry into force of the Agreement Establishing the Multilateral Trade Organization ("MTO")); Agreement Establishing the Multilateral Trade Organization [World Trade Organization], Dec. 15, 1993, 33 I.L.M. 13, 22 (1994) (stating that the Agreement will enter into force in accordance with paragraph 3 of the Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations); Final Act para. 3 (stating that January 1, 1995 is the date of entry into force).

¹²¹ TRIPs Agreement, *supra* note 6, art. 65. A country with an economy in transition may delay application until the year 2000 if it meets three criteria: 1) it is in the process of transformation from a centrally-planned into a market, free-enterprise economy; 2) it is undertaking structural reform of its intellectual property system; and 3) it faces special problems in the preparation and implementation of intellectual property laws and regulations. *See id.*

¹²² An LDC is similar to a developing country, except LDCs, unlike developing countries, have a declining standard of living. KRUGMAN & OBSTFELD, *supra* note 1, at 240 n.1.

¹²³ TRIPs Agreement, *supra* note 6, art. 66 (stating that "in view of their special needs and requirements, their economic, financial and administrative constraints, and their need for flexibility to create a viable technological base, least-developed country Members shall not be required to apply the provisions of this Agreement . . . for a period of 10 years from the date of application . . .").

countries and LDCs have had longer transitional periods, they, along with developed countries, have had to comply with Articles 3, 4, and 5 of the TRIPs Agreement since January 1, 1996.¹²⁴ Articles 3, 4, and 5 outline the national treatment and most favored nation treatment obligations.¹²⁵

The TRIPs Agreement has had a higher success rate in the protection of international intellectual property rights than the WIPO.¹²⁶ The combination of a minimum standard for the protection of intellectual property rights with a detailed dispute settlement mechanism has made it easier for countries to determine their intellectual property rights and obligations.¹²⁷ However, the TRIPs Agreement still has its own share of problems. While most developed countries have clearly taken steps to change and adopt national laws that are in compliance with the TRIPs Agreement, there are some developed countries that have not changed their national laws to completely comply with the TRIPs Agreement.¹²⁸ For instance, the new European Community regulation,¹²⁹ which requires the use of a single trademark for a product within the European Community, possibly violates Article 20¹³⁰ of the TRIPs Agreement because it imposes an unjustified encumbrance on the trademark holder.¹³¹ Even though most developing countries have argued against the benefits of the TRIPs Agreement, developing countries have started to change their national laws to comply with the TRIPs

¹²⁴ See *id.* art. 65 (stating that Articles 3, 4, and 5 are excluded from the four year delay to which developing countries are otherwise entitled. Thus, developing countries had to comply with Articles 3, 4, and 5 as of January 1, 1996, the effective date of compliance for the TRIPs Agreement).

¹²⁵ See generally TRIPs Agreement, *supra* note 6, arts. 3–5.

¹²⁶ See Dreyfuss & Lowenfeld, *supra* note 95, at 281.

¹²⁷ See Pechman, *supra* note 50, at 188.

¹²⁸ See John E. Giust, *Noncompliance with TRIPs by Developed and Developing Countries: Is TRIPs Working?*, 8 *IND. INT'L & COMP. L. REV.* 69, 95 (1997).

¹²⁹ Council Regulation 2309/93 Laying Down Community Procedures for the Authorization and Supervision of Medicinal Products for Human and Veterinary Use and Establishing a European Agency for the Evaluation of Medicinal Products, 1993 O.J. (L 214) 1.

¹³⁰ TRIPs Agreement, *supra* note 6, art. 20 (stating that “[t]he use of a trademark in the course of trade shall not be unjustifiably encumbered by special requirements, such as use with another trademark, use in a special form or use in a manner detrimental to its capability to distinguish the goods or services of one undertaking from those of other undertakings.”).

¹³¹ See Giust, *supra* note 128, at 80–83.

Agreement.¹³² For example, developing countries in Southeast Asia have begun to change their national laws and set forth the administrative structure in order to comply with the TRIPs Agreement.¹³³ Even though most developing countries likely will not meet the compliance deadline and the problem of ineffective enforcement will still exist, these developing countries, in the long run, will certainly offer foreign claimants better intellectual property protection against possible infringements.¹³⁴

In addition, the DSU system appears to be effective in bringing violating countries into compliance, as demonstrated by the case against India for patent infringement.¹³⁵ As a developing country, India has failed to implement both the “mailbox” rule under Article 70.8¹³⁶ and

¹³² John J.P. Howley & Antonino B. Roman, *Assessing Enforcement Status of Intellectual Property Rights in Asia*, N.Y. L. J., Apr. 26, 1999, at S2.

¹³³ See *id.* (reporting that the Philippines enacted a comprehensive Intellectual Property Code which went into effect January 1, 1998. Although the code represents a large step towards compliance with the TRIPs Agreement, the code still fails to fully bring the Philippines into full compliance with the TRIPs Agreement. Despite the fact that Indonesia in 1997 amended its copyright law to comply with the TRIPs Agreement, Indonesia still suffers from the problem of inconsistent enforcement of intellectual property laws and an ineffective legal system. Even though South Korea has increased budget allocations for intellectual property right protection efforts, South Korea must still address issues such as the lack of retroactive protection for copyrighted works and market access restrictions for motion pictures and cable TV programming.); see also Michael W. Smith, *Bringing Developing Countries' Intellectual Property Laws to TRIPs Standards: Hurdles and Pitfalls Facing Vietnam's Efforts to Normalize an Intellectual Property Regime*, 31 CASE W. RES. J. INT'L L. 211, 234 (1999) (noting that the results in Southeast Asia have been mixed. Countries like Singapore, Indonesia, and Malaysia have enacted national intellectual property laws which comply with the TRIPs Agreement. Other countries like Thailand, however, have continued to resist the pressure of U.S. sanctions).

¹³⁴ See Howley & Roman, *supra* note 132 (noting the countries that will not reform their intellectual property laws in time for the deadline).

¹³⁵ See Giust, *supra* note 128, at 91-95.

¹³⁶ Under the “mailbox” rule, the TRIPs Agreement states that when a Member nation does not make available patent protection for pharmaceutical and agricultural chemical products, that Member nation must: provide a means for applicants to file for patents to protect those products; apply the criteria for patentability to those filed applications as if patent protection existed on the date of filing; and provide patent protection for those applications meeting the patentability criteria. See TRIPs Agreement, *supra* note 6, art. 70, para. 8; see also Otten & Wager, *supra* note 104, at 408 (noting that the “mailbox” rule requires a country to accept the filing of patent applications in the areas of agricultural chemical products and pharmaceutical goods from January 1, 1995).

the “pipeline” provision under Article 70.9¹³⁷ by the set deadline of January 1, 1995.¹³⁸ After an unsuccessful consultation with India under the WTO DSU system, a panel was formed by the Dispute Settlement Body.¹³⁹ The dispute panel ruled that “the lack of legal security in the operation of the mailbox system in India is such that the system cannot adequately achieve the object and purpose of Article 70.8 and protect legitimate expectations contained therein for inventors of pharmaceutical and agricultural chemical products.”¹⁴⁰ With the threat of withholding of trade benefits by the WTO, India has recently begun to change its laws to comply with this aspect of the TRIPs Agreement.¹⁴¹

III. DEVELOPING COUNTRIES’ ECONOMIC GROWTH AND THEIR VIEWS ON THE EFFECT OF THE TRIPs AGREEMENT

A. *Background on Developing Countries and Economic Development*

1. *The Economic Status of Developing Countries*

With the increase in international trade and the expansion of the global market starting in the 1970s, one recognizes a dramatic change in the international economic

¹³⁷ The “pipeline” provision works in conjunction with the “mailbox” rule. See TRIPs Agreement, *supra* note 6, art. 70, para. 9. If an applicant files a patent under the “mailbox” rule and receives marketing approval, the individual possesses up to five years of exclusive marketing rights. *Id.*; see also Otten & Wager, *supra* note 104, at 408 (noting that the five year exclusive marketing rights in the other country expire whether or not the patent application is approved).

¹³⁸ See Giust, *supra* note 128, at 91–94.

¹³⁹ *Id.* at 92.

¹⁴⁰ *Id.* at 93 (quoting WTO Panel Report on India—Patent Protection for Pharmaceutical and Agricultural Products, WT/DS50/R at <http://www.wto.org/wto/ddf/ep/search.html> (last modified Sept. 5, 1997)).

¹⁴¹ See *India Patent Law Report Due this Month*, MARKETLETTER, Aug. 7, 2000, available at 2000 WL 7542969; Giust, *supra* note 132, at 95–96; see also Martin J. Adelman & Sonia Baldia, *Prospects and Limits of the Patent Provision in the TRIPs Agreement: The Case of India*, 29 VAND. J. TRANSNAT’L L. 507, 533 (1996) (noting that the science based industries in India will be drastically restructured by the TRIPs agreement. The winners of the restructuring of the intellectual property infrastructure will be the Indian scientist who will now have his or her research protected within his or her own country. The big losers of the restructuring will be the individuals who depend on imitation drugs).

structure.¹⁴² Large multinational corporations with far-flung corporate networks and global factories dominate this new economic order.¹⁴³ Many nations, like the United States and four of the Newly Industrialized Countries (“NICs”),¹⁴⁴ have experienced unprecedented levels of economic growth and development.¹⁴⁵ However, not all nations have enjoyed this unprecedented level of economic growth and development. Economic growth and development in the world have always been geographically uneven. Since the end of World War II, many of the developing countries have been attempting to catch up economically with the developed countries by promoting industrialization and using trade policy to cope with the disparate domestic economic development.¹⁴⁶

Economists and international organizations have largely focused their attention on the development gap between the countries of the Northern Hemisphere and the countries of the Southern Hemisphere.¹⁴⁷ They specifically attempt to understand the disturbing problem of why, despite economic growth and some improvement in living conditions in the Southern Hemisphere, the divide between rich and poor nations has not diminished.¹⁴⁸ For instance, between 1950 and 1980, the growth in real per capita income in the Southern Hemisphere amounted to \$81, in comparison to the

¹⁴² See EDWARD J. MALECKI, *TECHNOLOGY AND ECONOMIC DEVELOPMENT: THE DYNAMICS OF LOCAL, REGIONAL AND NATIONAL COMPETITIVENESS* 192 (2d ed., 1997).

¹⁴³ See *id.*

¹⁴⁴ The NICs include South Korea, Taiwan, Hong Kong, and Singapore. *Id.* at 2.

¹⁴⁵ See Chantal Thomas, *Causes of Inequality in the International Economic Order: Critical Race Theory and Postcolonial Development*, 9 *TRANSNAT'L L. & CONTEMP. PROBS.* 1, 9 (1999) (stating that the NICs have industrialized at an unprecedented speed since the 1970s by pursuing strategic trade policy); see also Dr. Gerald P. Buccino, *A Tale of Two Economies—It was the Best of Times, It was the Worst of Times*, 1997 *AM. BANKR. INST. J.* 24.

¹⁴⁶ See KRUGMAN & OBSTFELD, *supra* note 1, at 240–41; see also Gana, *supra* note 99, at 736 (noting the developing countries' drive to expand their economies in order to increase economic gains); see also William A. Lovett, *Current World Trade Agenda: GATT, Regionalism, and Unresolved Asymmetry Problems*, 62 *FORDHAM L. REV.* 2001, 2001–02 (1994).

¹⁴⁷ Some scholars and politicians use the terms North and South to distinguish between the richer and poorer countries of the world. THOMAS D. LAIRSON & DAVID SKIDMORE, *INTERNATIONAL POLITICAL ECONOMY: THE STRUGGLE FOR POWER AND WEALTH* 181 n.1 (1993).

¹⁴⁸ See *id.* at 182–84 (noting that the development gap between the North and South is growing larger).

\$5,807 improvement in the Northern Hemisphere.¹⁴⁹ The difference in social and physical well-being also exemplifies the gap between the two hemispheres.¹⁵⁰ The average life expectancy in the Northern Hemisphere in 1989 was seventy-six years, but the average life expectancy in the Southern Hemisphere was only sixty-three years.¹⁵¹ In addition, in 1989, the average diet in the Northern Hemisphere consisted of over twenty-five percent more calories than the average diet in the Southern Hemisphere.¹⁵² In 1990, the World Bank Report estimated that a majority of the 950 million people of the world suffering from chronic malnutrition lived in the South.¹⁵³ Moreover, the differences in the medical resources available to the citizens of the Northern and Southern Hemispheres are striking.¹⁵⁴ In 1984, Northern Hemisphere countries averaged one doctor for every 450 people, while the Southern Hemisphere averaged one doctor for every 4,990 people.¹⁵⁵ The economic structures of the Southern and Northern Hemispheres also differ dramatically.¹⁵⁶ Agriculture accounts for about 19% of the total Gross Domestic Product ("GDP")¹⁵⁷ in the South while agriculture accounts for only 3% of the GDP in the North.¹⁵⁸ In the 1980s, the average prices for agricultural goods decreased, causing a balance of payment problem in developing countries.¹⁵⁹

¹⁴⁹ LAIRSON & SKIDMORE, *supra* note 147, at 184 (citing Mitchell A. Seligson, *The Dual Gaps: An Overview of Theory and Research*, in *THE GAP BETWEEN RICH AND POOR: CONTENDING PERSPECTIVES ON THE POLITICAL ECONOMY OF DEVELOPMENT* 3 (Mitchell Seligson ed., 1984)).

¹⁵⁰ *Id.*

¹⁵¹ *Id.*

¹⁵² *See id.* (citing WORLD BANK, *WORLD DEV. REP.*, 1991 tbls.1, 28 (1991)).

¹⁵³ LAIRSON & SKIDMORE, *supra* note 147, at 184 (citing Robin Broad et al., *Development: The Market Is Not Enough*, 81 *FOREIGN POL'Y* 144, 145 (1990)).

¹⁵⁴ *See id.*

¹⁵⁵ *Id.*

¹⁵⁶ *Id.* at 185.

¹⁵⁷ Gross domestic product is a measure of the value of goods and services produced by a country during a certain period of time. *Id.* at 336.

¹⁵⁸ *Id.* at 185 (citing WORLD BANK, *supra* note 152, tbl.16).

¹⁵⁹ *See* LAIRSON & SKIDMORE, *supra* note 147, at 185; WORLD BANK, *WORLD DEVELOPMENT REPORT*, 1991 tbl.14 (1991) (noting the average prices of southern exports fell relative to the average prices of the goods the South imported. The quantity of southern exports that could buy \$100 worth of northern exports in 1980 could only buy \$89 worth of the same goods in 1988.).

2. *Theories on the Key to Economic Growth*

Traditionally, the economies of developing countries depend on the exporting of agricultural goods.¹⁶⁰ However, economists have noted that developing countries cannot economically develop by simply increasing current production because of the phenomenon of “immizerizing growth”.¹⁶¹ Immizerizing growth is defined as a situation in which the increase in production of goods causes a decrease in economic growth.¹⁶² For example, an increase in agricultural goods may hurt market equilibrium where market supply outweighs market demand. As a result, agricultural prices are driven down, resulting in a net welfare loss. In an attempt to help developing countries grow economically, neoclassical economists during the past decade have analyzed and formulated economic growth theories. The Solow model, formulated by Robert Solow, is one of the leading growth theories in the area of developmental economics. In his model, Solow argues that there are three factors of production—labor, capital, and technical progress.¹⁶³ Previous growth models account for only two factors of production—labor and capital.¹⁶⁴ Solow recognized that technical progress acts as an “enlarger” of the number of hours worked.¹⁶⁵ For example, four working hours in the nineteenth century is equivalent to one hour or less in the twentieth century due to technology. Thus, technology gives poorer countries an opportunity to catch up with wealthier countries.¹⁶⁶ In summary, developing countries should expand their technological bases to increase growth and

¹⁶⁰ See LAIRSON & SKIDMORE, *supra* note 147, at 185; see also KRUGMAN & OBSTFELD, *supra* note 1, at 240, 256.

¹⁶¹ See David Silverstein, *Intellectual Property Rights, Trading Patterns and Practices, Wealth Distributions, Development and Standard of Living: A North-South Perspective on Patent Law Harmonization*, in INTERNATIONAL TRADE AND INTELLECTUAL PROPERTY 155, 159–60 (George R. Stewart et al. eds., 1994) (citing R.E. CAVES & R.W. JONES, WORLD TRADE AND PAYMENTS: AN INTRODUCTION 536–37 (1973)).

¹⁶² See *id.*

¹⁶³ See Robert Solow, *A Contribution to the Theory of Economic Growth*, 70 Q.J. ECON. 65, 66 (1956).

¹⁶⁴ See *id.* at 65.

¹⁶⁵ See *id.* (stating because output increases as a function of technology, if output is constant and technology increases, the number of labor hours must decrease).

¹⁶⁶ See NANYENYA-TAKIRAMBUDE, *supra* note 48, at 2–3 (noting that with technology, poorer countries can produce and sell enough to expand their economies).

attain the levels found within industrialized countries, such as the United States and Britain. Thus, governments in developing countries have to promote industrialization through the economic policy of protection of infant industries through the use of tariffs, import substitution, and subsidies.¹⁶⁷

While some third world¹⁶⁸ countries have successfully created and accumulated a large supply of technology, most are unable to create and maintain high levels of capital and technology.¹⁶⁹ The “Two Gap” Theory recognizes two main constraints limiting a developing country’s ability to gain technology.¹⁷⁰ First, developing countries are often unable to save enough capital to create and maintain a technological base in order to promote economic growth.¹⁷¹ Second, a balance of payment problem typically plagues developing countries, where the cost of industrial imports far exceeds agricultural export revenues.¹⁷² As a result, the governments of developing countries often owe money to other nations, and, consequently, do not have the capital to invest in technology.

One solution to the problems listed in the Two Gap Theory is foreign direct investment.¹⁷³ Developing countries often look towards foreign direct investment to supplement the lack of domestic capital to invest in technology.¹⁷⁴ For developing countries, a popular solution has been to encourage the free flow of technology from industrialized countries to developing countries.¹⁷⁵ Developing countries often depend on the new technology originating from laboratories and universities in the developed countries.¹⁷⁶

¹⁶⁷ See KRUGMAN & OBSTFELD, *supra* note 1, at 243.

¹⁶⁸ Third world countries are countries whose economies are in the earlier stages of industrialization. LAIRSON & SKIDMORE, *supra* note 147, at 183 n.1. First World Countries are industrialized capitalist countries. *Id.* Second World Countries are industrialized communist countries. *Id.*

¹⁶⁹ See *id.* at 258.

¹⁷⁰ See PAUL KRUGMAN, *International Finance and Economic Development*, in FINANCE AND DEVELOPMENT: ISSUES AND EXPERIENCE 15 (A. Giovannini ed., 1993) [hereinafter *International Finance*].

¹⁷¹ See *id.*

¹⁷² See *id.*

¹⁷³ See *id.* at 15–16.

¹⁷⁴ See LAIRSON & SKIDMORE, *supra* note 147, at 258.

¹⁷⁵ See *id.*

¹⁷⁶ See *id.*

Recently, developing countries have increasingly demanded access to Western technology.¹⁷⁷ These demands have gone as far as to call for an absolute abolition of the international intellectual and industrial property regimes and for the creation of the free flow of technology across national boundaries.¹⁷⁸ Developing countries argue that the goal of international protection of intellectual property rights reflects the interests of those with dominant economies in the world, specifically the United States, the European Union, and Japan.¹⁷⁹ The protection of intellectual property rights does not reflect the interest of developing countries.¹⁸⁰ Moreover, developing countries maintain that under the doctrine of “uneven development,” the developed countries became wealthy at the expense of the developing countries because the developed countries were first to industrialize and have not given developing countries a chance to advance.¹⁸¹ The developed countries now actually owe the developing countries a share of this technology because it was earned at the expense of developing countries. In addition, developing countries perceive intellectual property rights as a method of transferring money from developing countries to developed countries through the form of rent transfer.¹⁸² In short, developing countries perceive the existing international economic order and legal structure as unfair because the developed countries receive far more benefits under this system.

Believing that the current international economic order is unfair, governments of developing countries have pushed the developed countries to change their policies and create a new

¹⁷⁷ NANYENA-TAKIRAMBUDE, *supra* note 48, at 70.

¹⁷⁸ *See id.*

¹⁷⁹ *See generally* Jean M. Dettmann, *GATT: An Opportunity for an Intellectual Property Rights Solution*, 4 *TRANSNAT'L LAW.* 347, 368-72 (1991) (noting that developing countries assert that they lack bargaining power and that the GATT is a “rich man’s club” that serves the interests of developed countries only).

¹⁸⁰ *See id.* at 368-70.

¹⁸¹ *See* KRUGMAN & OBSTFELD, *supra* note 1, at 258.

¹⁸² *See* Frederick M. Abbott, *The WTO TRIPs Agreement and Global Economic Development*, 72 *CHI.-KENT L. REV.* 382, 392 (1996) (quoting Carlos A. Primo Braga & Carsten Fink, *The Economic Justification for the Grant of Intellectual Property Rights: Patterns of Convergence and Conflict*, 72 *CHI.-KENT L. REV.* 439, 443 (1996)); *see also* Edwin Mansfield, *Unauthorized Use of Intellectual Property: Effects on Investment, Technology Transfer, and Innovation*, in *GLOBAL DIMENSIONS OF INTELLECTUAL PROPERTY RIGHTS IN SCIENCE AND TECHNOLOGY* 107, 110 (Mitchel B. Wallerstein et al. eds., 1993).

international economic order.¹⁸³ The Declaration on the Establishment of a New International Economic Order sets forth the principle of “[g]iving to the developing countries access to the achievements of modern science and technology, and promoting the transfer of technology and the creation of indigenous technology for the benefit of the developing countries in forms and in accordance with procedures which are suited to their economies.”¹⁸⁴ This principle was further expanded in the Charter of Economic Rights and Duties of States, which states that:

1. Every State has the right to benefit from the advances and developments in science and technology for the acceleration of its economic and social development.
2. All States should promote international scientific and technological co-operation and the transfer of technology, with proper regard for all legitimate interests including, inter alia, the rights and duties of holders, suppliers and recipients of technology.¹⁸⁵

Even though developing countries call for a new economic order and depend on the transfer of technology to fuel their economic growth, the TRIPs Agreement increases protection of intellectual property rights and restricts the transfer of technology.¹⁸⁶ As a result, developing countries are obligated to alter their national intellectual property laws to comply with the TRIPs Agreement.¹⁸⁷ In the end, the TRIPs

¹⁸³ See Jagdish N. Bhagwati, *Introduction*, in *THE NEW INTERNATIONAL ECONOMIC ORDER: THE NORTH-SOUTH DEBATE 1* (Jagdish N. Bhagwati ed., 1977) (noting that after the decline of the colonial empires and the emergence of new developing countries on the international scene, the demands by the South for a new international economic order were addressed at numerous international conferences); see also Gana, *supra* note 99, at 737 (noting that some developing countries feel that their existing economic condition is the result of colonialism by the developed countries. The developing countries want economic compensation from the developed countries for past wrongs.).

¹⁸⁴ Maureen Irish, *Intellectual Property and North-South Relations*, in *INTERNATIONAL TRADE AND INTELLECTUAL PROPERTY* 181, 181–82 (George R. Stewart et al. eds., 1994) (quoting *Declaration on the Establishment of a New International Economic Order*, U.N. G.A. Res. A/3201 (S-VI), art. 4(p) (1974), reprinted in *INTERNATIONAL ECONOMIC LAW: BASIC DOCUMENTS* 403 (Philip Kunig et al. eds., 1989)).

¹⁸⁵ *Id.* at 182 (quoting *Charter of Economic Rights and Duties of States*, U.N. G.A. Res. A/3281 (XXIX) (1974), reprinted in *INTERNATIONAL ECONOMIC LAW: BASIC DOCUMENTS* 407 (Philip Kunig et al. eds., 1989)).

¹⁸⁶ See *id.* at 181; Williamson, *supra* note 54.

¹⁸⁷ See P. Sai-wing Ho, *Multilateral Trade Negotiations and the Changing Prospects for Third World Development: Assessing from a Southern Perspective*, 32 *J. ECON. ISSUES* 375, 377, 379 (1998).

Agreement limits the available range of trade and industrial policy options available to developing countries.¹⁸⁸

B. Countering Views on the Effects of the TRIPs Agreement

Developed and developing countries are split over several issues regarding the benefits and burdens of the TRIPs Agreement.¹⁸⁹ The main argument between developed and developing countries arises over whether the TRIPs Agreement is focused more to benefit the industries of developed countries rather than the developing countries.¹⁹⁰ During the negotiations of the Uruguay Round, concerns were raised regarding whether the TRIPs Agreement damages the economic growth of developing countries.¹⁹¹ The member nations realized that the TRIPs agreement would potentially impact the economic interest of the developing countries because most developing countries do not currently have the

¹⁸⁸ *Id.* at 378 (quoting Diana Tussie, *The Uruguay Round and the Trading System in the Balance: Dilemmas for Developing Countries*, in TRADE AND GROWTH: NEW DILEMMAS IN TRADE POLICY 69, 87 (Manuel R. Agosin & Diana Tussie eds., 1993)).

¹⁸⁹ See Eileen Hill, *U.S. Addresses Contentious Issues in Negotiations on Trade-Related Aspects of Intellectual Property Rights*, BUS. AM, Nov. 19, 1990, at 18 (pointing out that there are several issues on which the LDCs and the developed countries are split. For instance, several LDCs argue that GATT does not have “competence in the full range of issues addressed by TRIPs”); see also Romano, *supra* note 55, at 560 (noting that the issue of whether the WTO should have jurisdiction over intellectual property has been a point of contention between developed countries and developing countries. Developing countries contend that only the WIPO has jurisdiction over intellectual property issues and it would be erroneous to take control of intellectual property issues away from national governments. On the other hand, developed countries maintain that the WIPO has failed to offer strong and effective intellectual property laws); see also Pechman, *supra* note 50, at 183–84 (quoting Michael L. Doane, *TRIPs and International Intellectual Property Protection in an Age of Advancing Technology*, 9 AM. U. J. INT’L L. & POL’Y 465, 472–73 (1994)) (noting that developing nations felt that the TRIPs Agreement exceeded the purpose of GATT and should be left within the jurisdiction of WIPO); see also Carlos Alberto Primo Braga, *The Economics of Intellectual Property Rights and the GATT: A View From the South*, 22 VAND. J. TRANSNAT’L L. 243, 252 (1989) (pointing out that another issue between developed and developing countries has been the debate over the “haves” and “have nots.” The “have nots,” or developing countries, see stricter international intellectual property protection as a method by which the “haves,” or developed countries, maintain their position as the international leaders by controlling the new technologies. Thus, the intellectual property protections by which developed countries prevent new technology from being transferred to the developing countries are seen as a tool to maintain the current political system.).

¹⁹⁰ See Braga, *supra* note 189, at 252–53.

¹⁹¹ See Abbott, *supra* note 182, at 387.

legal infrastructure necessary to protect intellectual property rights and often depend on foreign technology to economically develop.¹⁹² Differing views are advanced regarding the positive and negative impacts of the TRIPs Agreement and the extent of these impacts on developing countries and their economic growth. Some countries, particularly developed ones, maintain that a stronger intellectual property rights system is in the best interest of the developing countries.¹⁹³ However, developing countries contend that they have little to gain from the TRIPs Agreement.¹⁹⁴

There are several arguments supporting the benefits of the TRIPs Agreement for developing countries and their economic growth. Some theorists argue that a stronger intellectual property rights system will encourage foreign direct investment and the transfer of technology from developed countries to developing countries.¹⁹⁵ These theorists believe that foreign firms are currently reluctant to invest in countries that do not have a strong legal system to protect intellectual property rights because these firms fear that their technology will be stolen and sold to third parties.¹⁹⁶ Thus, with an adequate legal infrastructure to protect intellectual property rights, foreign firms will be more willing to transfer technology to developing countries, therefore, increasing foreign direct investment.¹⁹⁷ Another argument is “if developing countries do not adopt high levels

¹⁹² *Id.* at 390; Williamson, *supra* note 54, at 4.

¹⁹³ Abbott, *supra* note 182, at 390; *see also* Williamson, *supra* note 54, at 4 (noting that “the United States has argued that it is in the developing country’s own interest to provide adequate and effective intellectual property protection for all companies, both foreign and domestic”); *see also* Theresa Beeby Lewis, *Patent Protection for the Pharmaceutical Industry: A Survey of the Patent Laws of Various Countries*, 30 INT’L LAW. 835, 838 (1996) (quoting Stefan Kirchanski, *Protection of U.S. Patent Rights in Developing Countries: U.S. Efforts to Enforce Pharmaceutical Patents in Thailand*, 16 LOY. L.A. INT’L & COMP. L. REV. 569, 572 (1994)) (noting that western countries believe that a patent law system will lead to economic growth). For example, in 1987 the Mexican government passed a regulation that provided intellectual property protection and soon afterwards, one of the major government research laboratories reported positive results. *See* Robert M. Sherwood, *Intellectual Property for Latin America: How Soon Will it Work?*, 4-SPG NAFTA: L. & BUS. REV. AM. 77, 86 (1998).

¹⁹⁴ *See* Lewis, *supra* note 193, at 838–39; Gana, *supra* note 99, at 740 (noting that the TRIPs Agreement places a disproportionate burden upon developing countries).

¹⁹⁵ *See* Williamson, *supra* note 54.

¹⁹⁶ *See* Braga & Fink, *supra* note 12, at 172.

¹⁹⁷ *See id.*

of [intellectual property rights], their scientists and other innovators will leave” because the national laws are not sufficient to protect innovations and ideas.¹⁹⁸ Thus, a strong national system to protect intellectual property rights will encourage domestic scientists to remain in their countries and will also encourage local research and development and domestic enterprises.¹⁹⁹ In the long run, developing countries will gain the international reputation of being a competitive supplier of technology and innovations and become less dependent on other countries for technology.²⁰⁰ The citizens of developing countries would own more intellectual property rights and the disparity in the number of intellectual property rights owned between developed countries and developing countries would decrease. Studies and past experiences have shown that the key to continual economic success lies in the technological development within a country.²⁰¹

On the other hand, many argue that the TRIPs Agreement is counterproductive. Developing countries have denounced the developed countries’ interest in TRIPs as being “self-serving and hypocritical.”²⁰² Because developing countries are not major producers of intellectual property products, developing countries see no real benefits deriving from strengthening the system protecting against infringement of intellectual property rights.²⁰³ To many developing countries, an intellectual property protection mechanism translates into a blockade of the transfer of technology and an impediment to economic development.²⁰⁴

¹⁹⁸ Abbott, *supra* note 182, at 390.

¹⁹⁹ See Williamson, *supra* note 54.

²⁰⁰ See *id.*; G.K. Helleiner, *International Technology Issues: Southern Needs and Northern Responses*, in *THE NEW INTERNATIONAL ECONOMIC ORDER: THE NORTH-SOUTH DEBATE* 307, 311 (Jagdish N. Bhagwati ed., 1977) (noting that unless developing countries form their own domestic technological bases, they will remain dependent on the uncertainty of foreign direct investment and transfer of technology).

²⁰¹ See MALECKI, *supra* note 142, at 27 (noting that the “advanced” economies of the world have successfully made the shift from primary economic enterprises (i.e., agriculture) to the service and manufacturing sector which has driven economic growth).

²⁰² Lewis, *supra* note 193, at 838–39.

²⁰³ *Id.* at 839.

²⁰⁴ *Id.*; see also Romano, *supra* note 55, at 561–62 (pointing out that some countries are hesitant to enact intellectual property protection regulations because they fear that this will hurt domestic industries. Because poorer countries depend on foreign technology for economic development, an

Most developing countries believe that intellectual property products should be available at minimal costs.²⁰⁵ If the TRIPs Agreement is enforced, the developing countries would be faced with the formidable cost associated with enforcing intellectual property rights.²⁰⁶ Monitoring is expensive and most developing countries will have to create a civil justice system to hear intellectual property disputes.²⁰⁷ These member countries will have to set up copyright, trademark, and patent offices and staff them with trained personnel.²⁰⁸

Although developing countries initially resisted the TRIPs Agreement, it was eventually accepted for a variety of reasons.²⁰⁹ First, the developing countries' acceptance of the TRIPs Agreement was to prevent the United States from imposing further unilateral trade sanctions on violating countries.²¹⁰ Under the TRIPs Agreement, complaining parties, such as the United States, will be forced to comply with the WTO's dispute settlement system.²¹¹ Second, Articles 65 and 66 of the TRIPs Agreement provide substantial concessions to developing countries.²¹² Developing and less developed countries have an extended

intellectual property protection system would serve as a "knowledge blockade" and deprive the country access to modern technology).

²⁰⁵ Lewis, *supra* note 193, at 839; *see also* Braga, *supra* note 189, at 253 (noting that developing countries assign a greater value to the "social" interests, such as avoiding price increases in health and nutrition, over private gain).

²⁰⁶ Dreyfuss & Lowenfeld, *supra* note 95, at 302; *see also* Gana, *supra* note 99, at 759 n.91 (noting that the citizens of developing countries and less developed countries will find that applying for a patent is a difficult hurdle financially and legally); *see also* UN: *Developing Countries Need to Trade Off Costs and Benefits in Implementing TRIPs Agreement*, M2 PRESSWIRE, Mar. 7, 1997 [hereinafter *Trade Off Costs and Benefits*] (noting that for less developed countries and developing countries, the TRIPs Agreement translates into significant internal changes to their legal and administrative frameworks and, thus, large expenditures for these governments).

²⁰⁷ Dreyfuss & Lowenfeld, *supra* note 95, at 302.

²⁰⁸ *Id.*

²⁰⁹ Abbott, *supra* note 182, at 387.

²¹⁰ *Id.* at 388–89.

²¹¹ *See id.* at 388.

²¹² *Id.* at 387–88 (noting that member countries that are categorized as developing countries or countries in transition from a centrally-planned economy to a market economy have until five years after the enactment of the TRIPs Agreement to comply with the standards set forth in TRIPs. For countries that did not maintain patent protection for all areas covered by the TRIPs Agreement, there is an additional five year period to extend product patent protection to new areas. A ten year transition period generally applies to the least developed WTO members.).

period of time to comply with the TRIPs Agreement.²¹³ Even though the developing and less developed countries have signed onto the TRIPs Agreement, the question remains whether the TRIPs Agreement adversely affects the economic growth of developing countries and widens the developmental gap between the developed and developing nations.

IV. EMPIRICAL STUDIES ON THE EFFECTS OF THE TRIPs AGREEMENT ON THE ECONOMIES OF DEVELOPING COUNTRIES

In the past, there have been very few studies examining the direct relationship between intellectual property protection and economic development in the setting of the developing countries.²¹⁴ Older studies demonstrate that increased protection of intellectual property rights does not necessarily affect the transfer of technology in developing countries.²¹⁵ For example, a United Nations study did not find a correlation between developing countries with strong intellectual property protection and increased foreign direct investment.²¹⁶ Countries with the highest levels of foreign direct investment, such as Argentina, Brazil, China, and Thailand, have the lowest levels of intellectual property protection.²¹⁷ On the other hand, countries with high levels of intellectual property protection, such as Nigeria, have not attracted higher levels of foreign direct investment than other similarly situated countries.²¹⁸ With the increasing academic and policy-oriented interest in intellectual property protection, several new measures and studies concerning the effect of higher levels of intellectual property protection on

²¹³ *See id.*

²¹⁴ INTELLECTUAL PROPERTY AND ECONOMIC DEVELOPMENT, *supra* note 7, at 75.

²¹⁵ *See* Owen Lippert, *One Trip to the Dentist is Enough: Reasons to Strengthen Intellectual Property Rights Through the Free Trade Area of the Americas*, 9 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 241, 248–49 (1998); *see also* INTELLECTUAL PROPERTY AND ECONOMIC DEVELOPMENT, *supra* note 7, at 75 (explaining that Edwin Mansfield, in an unpublished study for the World Bank, found a lack of correlation between intellectual property protection and foreign direct investment and indicated that there was a lack of adequate data).

²¹⁶ Abbott, *supra* note 182, at 390 (citing Transnational Corporations and Management Divisions of the United Nations Department of Economic and Social Development, Intellectual Property Rights and Foreign Direct Investment 32, U.N. Doc. ST/CTC/SER.A/24, U.N. Sales No. E.93.II.A.10 (Carlos M. Correa ed., 1993)).

²¹⁷ *Id.*

²¹⁸ *Id.* at 390–91.

economic development and growth have emerged.²¹⁹ Numerous studies have been conducted to determine the effects of strengthening the protection of intellectual property rights through the TRIPs Agreement on economic growth, foreign direct investment, and technology transfer.²²⁰ The empirical data gathered in these new studies comes from either surveys of investors or from econometric works evaluating the impact of the TRIPs Agreements on developing countries.²²¹ These newer studies show a positive correlation between stronger intellectual property protection and increased foreign trade and foreign direct investment.²²²

A. *Empirical Studies on the Effects of the TRIPs Agreement on Foreign Direct Investment*

Many theorists have argued that firms in developed countries are more likely to invest in countries with higher levels of intellectual property protection.²²³ Without a high level of protection for intellectual property, firms are reluctant to invest in production that entails “a significant transfer of proprietary knowledge, such as R&D and technology-intensive manufacturing processes” due to the fear that domestic firms will steal the protected technology and produce and sell the protected product to third parties at a lower price.²²⁴ Thus, foreign corporations are unwilling to enter into joint ventures with local firms in countries which do not have a strong system of protection for intellectual property rights.²²⁵ In order to attract the foreign direct investment needed to create the technological basis for growth, developing countries need to implement a stronger system of protection for intellectual property rights. One of the leading economic analyses regarding the impact of

²¹⁹ See Braga & Fink, *supra* note 12, at 182.

²²⁰ See Lippert, *supra* note 215, at 249.

²²¹ See Braga & Fink, *supra* note 12, at 180–81.

²²² *Id.*

²²³ *Id.* at 172.

²²⁴ See *id.* at 173; see also Brett Frischmann, *Innovation and Institutions: Rethinking the Economics of U.S. Science and Technology Policy*, 24 VT. L. REV. 347, 368 (2000) (noting that as the classic story goes, firms are reluctant to concentrate their investments in those areas where exclusion is prohibitively costly because of the fear that competitors will copy and use their innovations without having to pay the research costs. Competitors will then be able to sell any resulting products at a lower price, stealing market share and preventing a recoupment of research costs.).

²²⁵ Braga & Fink, *supra* note 12, at 173.

increased protection for intellectual property rights on foreign direct investment was conducted by Edwin Mansfield.²²⁶ Based on surveys from executives of major U.S. corporations and patent attorneys, Mansfield found that there was a strong positive correlation between higher levels of intellectual property protection and foreign direct investment.²²⁷ Moreover, Mansfield discovered that although a higher level of intellectual property protection increased foreign direct investment, this positive correlation did not exist in all types of foreign direct investments and in all industrial sectors.²²⁸ For example, a stronger positive correlation between intellectual property protection and foreign direct investment existed in investment associated with research and development facilities than in investment related to sales and distribution outlets.²²⁹ Mansfield also found that when a country enacted a stronger intellectual property protection system, firms in the chemical, pharmaceutical, machinery, and electrical equipment industries increased the amount of foreign joint venture and foreign direct investment, while firms in the transportation equipment, metals, and food industries did not.²³⁰

In an attempt to explain the relation between the U.S. foreign direct investment flow into sixteen developing countries and newly industrialized countries and the level of protection for intellectual property rights, Jeong-Yeon Lee and Mansfield compiled an index of intellectual property protection for each of these sixteen countries by using a multivariate regression analysis.²³¹ Lee and Mansfield

²²⁶ See Robert M. Sherwood, *Intellectual Property Systems and Investment Stimulation: The Rating of Systems in Eighteen Developing Countries*, 37 IDEA 261, 351-52 (1997) [hereinafter *Rating of Systems*] (noting Mansfield's study was the first major empirical study on the importance of intellectual property protection for the stimulation of foreign direct investment in developing countries).

²²⁷ Edwin Mansfield, *Intellectual Property Protection, Direct Investment, and Technology Transfer 2* (International Finance Corporation Discussion Paper No. 27, 1995) [hereinafter *Mansfield Paper No.27*]; see also *Rating of Systems*, *supra* note 226, at 351-52 (noting that Mansfield "surveyed American, Japanese and German companies in six industries at a headquarter's level regarding the effect of the intellectual property regimes in sixteen countries on their investment, joint venture and licensing decisions").

²²⁸ See *Mansfield Paper No. 27*, *supra* note 227, at 2-4.

²²⁹ See *id.* at 2.

²³⁰ See *id.* at 2; see also Braga & Fink, *supra* note 12, at 175-76.

²³¹ Jeong-Yeon Lee & Edwin Mansfield, *Intellectual Property Protection and U.S. Foreign Direct Investment*, 78 REV. ECON. & STAT. 181, 181 (1996); Multivariate regression analysis is defined as a two-variable model where "the

discovered that countries with stronger intellectual property protection attracted significantly higher levels of foreign direct investment.²³² For instance, a survey confined to the chemical industry demonstrated that the percentage of a firm's investment devoted to research and development was directly related to the perceived strength of the intellectual property protection.²³³

However, Lee and Mansfield's study of intellectual property protection has been criticized for having two main weaknesses.²³⁴ Critics argue that the index is too subjective in character because the surveys include the firms' personal perception of what elements influence investment.²³⁵ Moreover, critics point out that the sample countries chosen for the study all have some technological capabilities and have a larger number of intellectual property disputes than the average countries.²³⁶ Thus, the results of the study are more likely to overstate the positive correlation between intellectual property protection and foreign direct investment.²³⁷

Robert Sherwood also conducted a comprehensive economic study that ranked national intellectual property rights regimes.²³⁸ Sherwood's data is based on a combination of a survey-based index and an "on the books" analysis of eighteen developing countries.²³⁹ Sherwood believes that because the research and development of new technology bears higher financial risk than any other commercial activity, stronger intellectual property protection helps reduce this risk and stimulates higher levels of investment in

dependent variable Y is a linear function of a series of independent variables X_1, X_2, \dots, X_k , and an error term." ROBERT S. PINDYCK & DANIEL L. RUBINFELD, *ECONOMETRIC MODELS & ECONOMIC FORECASTS* 73 (Scott D. Stratford & Linda Richmond, eds., 3d ed. 1991).

²³² Lee & Mansfield, *supra* note 231, at 185-86.

²³³ *See id.* at 185.

²³⁴ Braga & Fink, *supra* note 12, at 177.

²³⁵ *See id.* (noting that Mansfield's survey implicitly includes firms' perceptions about other factors influencing foreign investment and transfer of technology, such as the presence of potential imitators).

²³⁶ *See id.*

²³⁷ *Id.*

²³⁸ *See id.* at 183; *see also Rating of Systems, supra* note 226, at 261.

²³⁹ Braga & Fink, *supra* note 12, at 183; *see also Rating of Systems, supra* note 226, at 261.

the developing countries' technology.²⁴⁰ As a result, the creation of new technology "fosters considerable economic growth and enhances social welfare."²⁴¹ Sherwood's analysis starts each country with a maximum score of 100.²⁴² Points are then subtracted from the maximum score for weaknesses in one of eight major headings: enforceability; administration; treaties; and substantive laws for copyright, patents, trademarks, trade secrets, and life forms.²⁴³ The index then adds up to three points for a country's strong general commitment to intellectual property protection.²⁴⁴

Sherwood finds that while exact answers to the question of whether higher levels of intellectual property protection stimulates foreign direct investment are unavailable, overall trends and effects are complete and helpful.²⁴⁵ Sherwood also discovers that "the impact of the TRIPs Agreement on most developing countries is likely to be slightly negative in the short run (one to two years) and increasingly favorable as local firms and individuals begin to realize the potential benefits for their activities."²⁴⁶ Furthermore, Sherwood notes that while intellectual property protection provided by the TRIPs Agreement is sufficiently strong enough to stimulate international trade flows and foreign direct investment, it falls short of encouraging domestic innovation, such as domestic research and development of innovative technology.²⁴⁷ In other words, local scientists may still leave the developing countries for countries with stronger intellectual property protection. Furthermore, Sherwood finds that depending on the economy of the country and the country's current technological state, the impact of the TRIPs Agreement will differ among countries.²⁴⁸ For example, "[e]xtremely poor, weakly endowed countries differ from what are now called 'semi-industrialized' countries in that they are

²⁴⁰ See Robert M. Sherwood, *The TRIPs Agreement: Implications for Developing Countries*, 37 *IDEA* 491, 492 (1997) [hereinafter *Implications for Developing Countries*].

²⁴¹ *Id.*

²⁴² See *Rating of Systems*, *supra* note 226, at 264.

²⁴³ *Id.* at 265.

²⁴⁴ *Id.* at 287 (explaining that general commitment scores three points, partial commitment only scores one to two points, and no commitment scores zero points).

²⁴⁵ See *Implications for Developing Countries*, *supra* note 240, at 493.

²⁴⁶ *Id.* at 510.

²⁴⁷ *Id.* at 494–95.

²⁴⁸ See *id.* at 493–94.

less likely to have the ability to ‘pirate’ the intellectual property of others for private gains, and therefore have less to lose in moving to robust protection levels.”²⁴⁹ As with Lee and Mansfield’s analysis, Sherwood’s index is impaired by its subjective character.²⁵⁰ In both Sherwood’s and Mansfield and Lee’s studies, a positive correlation between strengthening of intellectual property protection and the increase of foreign direct investment generally exists. By providing higher levels of protection for intellectual property rights in general, the TRIPs Agreement encourages the foreign direct investment that developing countries need to create and develop technology.

B. Empirical Studies on the Effects of the TRIPs Agreement on International Trade

International trade opens up a country’s market and stimulates economic growth. While intellectual property protection can influence trade flows, the net impact of higher levels of intellectual property protection on international trade remains uncertain.²⁵¹ A study conducted by Keith E. Maskus and Mohan Penubarti, concluded that a higher level of intellectual property protection can have different effects on the imports of otherwise identical countries.²⁵² First, even though increased intellectual property protection can increase the holder’s market power on his or her intellectual property rights, this results in a decrease in demand for the protected goods because countries are unwilling to pay the royalty.²⁵³ Thus, there is a decrease in trade.²⁵⁴ Second, greater intellectual property protection could possibly increase demand for the protected product because people are unable to get the product on the black market.²⁵⁵

²⁴⁹ *Id.*

²⁵⁰ See Braga & Fink, *supra* note 12, at 183.

²⁵¹ *Id.* at 168–69 (explaining that for instance, developed countries wanting to export to developing countries with weak intellectual property protection infrastructure have to bear the additional transaction cost preventing local imitation of their goods. However, developed countries exporting to countries with a strong intellectual property protection infrastructure do not have to worry about this extra transaction cost. Thus, an international intellectual property protection system will help diminish this transaction cost.).

²⁵² See Keith E. Maskus & Mohan Penubarti, *How Trade-Related are Intellectual Property Rights?*, 39 J. INT’L ECON. 227, 229–30 (1995).

²⁵³ See *id.* at 229.

²⁵⁴ See *id.*

²⁵⁵ See *id.* at 230.

Depending on which scenario occurs, the trade results will differ.²⁵⁶ The net trade results will depend on which effect dominates.²⁵⁷ For example, “[i]f the market-power effect is more substantial than the market-expansion effect, trade flows may decrease in the aftermath of the reform. If the opposite occurs, strengthened IPR protection will lead to trade expansion.”²⁵⁸ Thus, the final answer regarding whether a higher level of protection for intellectual property rights diminishes international trade will be based on the particular situation and the figures involved.²⁵⁹

The winners under the TRIPs Agreement are clearly the firms in developed countries that invest heavily in research and development and export their technology and goods to other countries.²⁶⁰ Firms exporting technology abroad now have an enforceable legal remedy against foreign infringers of their intellectual property rights. In particular, pharmaceutical and agricultural chemical industries are the strongest winners because of the “supernatural” property rights they receive under the TRIPS agreement.²⁶¹ Indirectly, developed countries benefit through the increased financial and welfare gain of their own citizens and firms.²⁶² At first glance, it appears that the biggest losers are the NICs, who previously depended on imitating foreign technology as a tool for industrializing and growing economically.²⁶³ With the implementation of the TRIPs Agreement and the increased limits on these countries’ abilities to imitate foreign technology free of cost, these firms are forced to either develop their own technology or to obtain licenses from the patent owners.²⁶⁴ However, studies have demonstrated that a stronger intellectual property protection system can possibly work to the advantage of developing and less developed countries. The TRIPs Agreement will have varying welfare and

²⁵⁶ *See id.*

²⁵⁷ Braga & Fink, *supra* note 12, at 169.

²⁵⁸ *Id.* (discussing that if the good is a luxury good, then higher levels of protection for intellectual property rights will have no effect on the level of trade).

²⁵⁹ *See id.*

²⁶⁰ *See* A. Samuel Oddi, *TRIPs—Natural Rights and a “Polite Form of Economic Imperialism,”* 29 VAND. J. TRANSNAT’L L. 415, 455 (1996).

²⁶¹ *Id.*

²⁶² *See id.* at 457–58.

²⁶³ *See id.* at 458.

²⁶⁴ *Id.* at 458–59.

economic effects on developing countries depending on the economy and characteristics of each country.²⁶⁵ Even though “[t]here remains considerable uncertainty concerning the impact of the TRIPs Agreement on global economic development,” not all developing and less developed countries will be losers from the TRIPs Agreement.²⁶⁶

V. CONCLUSION

Multinational Corporations are profoundly disquieted by the Charter of Economic Rights and Duties, particularly those provisions dealing with expropriation and compensation. They are also troubled by the provisions for technology transfer, which essentially mean surrendering the heretofore exclusive patents and trade secrets of advanced technology to competitors in the Third World Much of this apprehension derives from a novel but intensely held perspective; the popular image of the world is no longer an infinitely expanding organism but rather a claustrophobic spaceship with limited and increasingly overtaxed resources, distributed hereafter to the winners of zero-sum competitions (your win is my loss).²⁶⁷

With the revolutionary changes in the world economy, developed countries like the United States and Britain have been trying to maintain their dominant positions in the world economic order by encouraging the development of new technological innovation. In the meantime, some developing countries have been adopting some of these new technological innovations without reimbursement to the

²⁶⁵ See Abbott, *supra* note 182, at 391–92 (quoting Carlos A. Primo Braga & Carsten Fink, *The Economic Justification for the Grant of Intellectual Property Rights: Patterns of Convergence and Conflict*, 72 CHI.-KENT L. REV. 439, 443 (1996)); see also Braga, *supra* note 189, at 264 (noting that there is no clear evidence that countries will either benefit or lose because of the TRIPs agreement. The impact of TRIPs on countries will differ among countries.); see also Braga & Fink, *supra* note 12, at 168 (noting that depending on the characteristics of the country, TRIPs will have different welfare effects. For example, if one assumes that the country has little ability for domestic technological innovation and limited technology transfer and foreign direct investment, TRIPs would hurt the country because the country would be paying out royalties for the use of intellectual property).

²⁶⁶ See Abbott, *supra* note 182, at 391–92.

²⁶⁷ NANYENYA-TAKIRAMBUDE, *supra* note 48, at 76 (quoting Michael Reisman, *Trade Helps the Traders—The Third World’s Fading Dream*, THE NATION, June 12, 1976, at 718).

developed countries. In response, developed countries have formulated national laws to protect against infringement of intellectual property rights. However, these national laws have not been effective in combating the problem of infringement of intellectual property rights. As a result, nations adopted both the Paris Convention for the Protection of Industrial Property and the Berne Convention for the Protection of Literary and Artistic Works to establish an international system of protection for intellectual property rights.²⁶⁸ However, both the Paris Convention and Berne Convention failed to establish the strong international system needed for policing against infringements of intellectual property rights. As a result, the developed countries moved for the strengthening of intellectual property rights under the Uruguay Round of GATT. Negotiations between developing and developed countries during the Uruguay Round led to the adoption of the TRIPs Agreement.²⁶⁹ The TRIPs Agreement offered a more comprehensive and higher level of protection for intellectual property rights than found in either the Paris or Berne Conventions.

Developing countries argue that the provisions set forth in the TRIPs Agreement hinder their economic growth because intellectual property rights serve to stop the transfer of technology.²⁷⁰ Many of the developing countries are economically disadvantaged in comparison to other nations. These countries were originally subject to Western colonialism and imperialism during the nineteenth and twentieth centuries. Their corporations are small and undercapitalized, their educational and technological systems are under funded, and their political systems are fragmented. In addition, least developed countries maintain that they will face formidable cost in enforcing the TRIPs Agreement.²⁷¹

Several recent economic studies have shown that higher levels of intellectual property protection do not necessarily result in the stopping or slowing down of the transfer of technology. These studies have discovered that strengthening protection for intellectual property rights result in possible

²⁶⁸ See Pechman, *supra* note 50, at 180–81 n.2.

²⁶⁹ See Abbott, *supra* note 182, at 390.

²⁷⁰ See Pechman, *supra* note 50, at 191; see also Smith, *supra* note 133, at 231.

²⁷¹ *Trade-Off Costs and Benefits*, *supra* note 206.

economic development and growth.²⁷² In a report entitled “The TRIPs Agreement and the Developing Countries,” commissioned by the WIPO, the United Nations Conference on Trade and Development outlines the financial and other implications of the TRIPs Agreement on developing countries.²⁷³ The objective of the report is “to assist developing countries in collaboration with the WIPO and the WTO to identify opportunities provided by the TRIPs Agreement, including for attracting investment and new technologies.”²⁷⁴ The report finds that by strengthening protection on the intellectual property rights, there may be a positive impact on developing countries through increases in local innovation, foreign direct investment, and technology transfers.²⁷⁵ In addition, the report notes that depending on the country’s economy, technological development, and existing system of protection for intellectual property rights, the impact of the TRIPs Agreement will differ significantly among countries.²⁷⁶ Newly industrialized countries with strong industrial and technological bases will most likely benefit from the TRIPs Agreement.²⁷⁷ Countries with a rudimentary technological basis, limited technology transfer, and little local innovation may feel a financial impact.²⁷⁸ Tension over the benefits and burdens of the TRIPs agreement between developed and developing countries will remain until member nations have worked through the provisions and requirements of the TRIPs Agreement and a new international equilibrium has been reached. With the passing of the second major deadline of January 1, 2000, new studies will reveal more on the effects of the TRIPs Agreement on developing countries. The final winners and losers of the TRIPs Agreement will not be revealed until the TRIPs Agreement has been fully implemented by all the member countries and industries have had time to adjust to this change in regulation.

²⁷² See Lee & Mansfield, *supra* note 231, at 185; see also *Trade Off Costs and Benefits*, *supra* note 200.

²⁷³ See *Trade Off Costs and Benefits*, *supra* note 206.

²⁷⁴ *Id.*

²⁷⁵ See *id.*

²⁷⁶ *Id.*

²⁷⁷ *Id.*

²⁷⁸ See *id.*

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