

2005

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Recommended Citation

Daniel J. Gervais, *Intellectual Property, Trade & Development: The State of Play*, 74 Fordham L. Rev. 505 (2005).

Available at: <https://ir.lawnet.fordham.edu/flr/vol74/iss2/8>

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Cover Page Footnote

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INTELLECTUAL PROPERTY, TRADE & DEVELOPMENT: THE STATE OF PLAY

*Daniel J. Gervais**

For too long IPRs have been regarded as food for the rich countries and poison for poor countries [I]t is not as simple as that. Poor countries may find them useful provided they are accommodated to suit local palates.¹

INTRODUCTION

The question one is tempted to ask Justice Laddie is: But exactly how can intellectual property rights (“IPRs”) be accommodated to suit local palates? In its 2002 Report,² the Commission, set up by the U.K. Government and chaired by Professor John Barton of Stanford Law School, suggested several ways in which international intellectual property (“IP”) could be amended to better fit the needs of developing countries. I will review those and other recommendations and discuss the ways in which IP norms can be adapted to address the needs of developing nations.

The focus of Part I will be to understand the economic, social, and cultural forces at play. Economics will provide the first set of analytical tools. The reason is self-evident. When U.S. and other Western lobbies successfully arranged the marriage of IP and trade rules,³ it became inevitable that IP rules would be measured using an economic yardstick. After all, trade liberalization is not an end in itself. Rather, it is a means to an end, the promotion of economic growth. While they may interface with those rights and standards, trade rules do not protect either environmental or labor standards, nor do they protect human rights as part of their core mission. Thus, by setting the IP table in the house of trade, the cloak of IP

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1. Sir Hugh Laddie, *Forward to Comm'n on Intell. Prop. Rights, Integrating Intellectual Property Rights and Development Policy* (2002), *available at* http://www.iprcommission.org/papers/pdfs/final_report/CIPRfullfinal.pdf [hereinafter U.K. IPR Commission Report].

2. *Id.*

3. *See infra* notes 10-11 and accompanying text.

as a simple variation on the classic theme of property⁴ or even as a human right— notions essentially developed in the eighteenth and nineteenth century⁵—was bound to fall.

The linkage between IP and trade also points to a different method of making policy analysis and recommendations. The raw public choice approach, where lobbies representing the most interested parties are locked in the same room, was used in a number of previous domestic IP lawmaking efforts.⁶ If one concedes that making a proper policy analysis is impossible or inherently unreliable because theoretical models are inadequate or valid empirical data is unavailable, then perhaps that is the only rational way to proceed. I am not yet prepared to throw in the policy towel, however, and neither did the U.K. Commission on Intellectual Property Rights (“U.K. IPR Commission”).⁷ As Professor John H. Barton noted in the preface, “We decided early on not just to attempt to suggest compromises among different interest groups, but to be as evidence-based as possible.”⁸

Against this backdrop, this Article first examines the emergence of the World Trade Organization (“WTO”) Agreement on Trade-Related Aspects of Intellectual Property Rights (“TRIPS”).⁹ TRIPS was negotiated as part of the Uruguay Round of Multilateral Trade Negotiations. TRIPS was an effort both to increase (for most WTO members) the level of IP protection and reduce differences among national rules. TRIPS added a significant level of comfort for multinational corporations deciding when and where to export to new markets or expand research and development efforts¹⁰—some of the more important factors those corporations tend to consider include the tax structure and available subsidies, the availability of qualified workers and the labor relations environment, the protection of investments, the quality of the legal and judicial systems, and law enforcement.¹¹ This

4. See generally William M. Landes & Richard A. Posner, *The Political Economy of Intellectual Property Law* (2004).

5. See generally Mark Rose, *Authors and Owners: The Invention of Copyright* (1991).

6. See Landes & Posner, *supra* note 4, at 16-22; see also Sheldon W. Halpern, *The Art of Compromise and Compromising Art: Copyright, Technology, and the Arts*, 50 *J. Copyright Soc’y U.S.A.* 273, 310 (2003).

7. See U.K. IPR Commission Report, *supra* note 1.

8. *Id.* at ii.

9. 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, 33 *I.L.M.* 1197 (1994) [hereinafter TRIPS].

10. See Edwin Mansfield, *Intellectual Property Protection, Foreign Direct Investment, and Technology Transfer* (Int’l Fin. Corp., Discussion Paper No. 19, 1994). Not surprisingly, it is a group funded by U.S.-based multinationals that first suggested linking trade and intellectual property in the General Agreement on Tariffs and Trade (“GATT”) context, and which produced the first draft text. See Andréa Koury Menescal, *Those Behind the TRIPS Agreement: The Influence of the ICC and the AIPPI on International Property Decisions*, *Intell. Prop. Q.*, Spring 2005, at 155; see also Susan K. Sell, *Private Power, Public Law: The Globalization of Intellectual Property Rights* 96-120 (2003).

11. See Keith E. Maskus, *Intellectual Property Rights in the Global Economy 199-205* (2000) (arguing that Intellectual Property Rights (“IPRs”) can enhance economic growth in

Article also considers the Doha Ministerial Declaration of November 2001 and follow-up work on access to medicines.

In Part II, this Article discusses recent economic analyses of the impact of IP protection on bilateral trade flows and foreign direct investment (“FDI”). Appropriate distinctions are made between, inter alia, trade and inward FDI. Wherever possible, lessons about the “right” level of intellectual protection are drawn. Recent efforts in the World Intellectual Property Organization (“WIPO”) and the WTO are also discussed.

In the third and final part, this Article looks at the current quest for a “balanced” approach and suggests ways in which such a balanced IP regime could be constructed, as part of a broad, knowledge-oriented economic strategy.

I. TRIPS

A. *The Emergence of the TRIPS Agreement*

The TRIPS Agreement was negotiated as part of the Uruguay Round of Multilateral Trade Negotiations. In fact, TRIPS is Annex 1C of the Agreement Establishing the World Trade Organization.¹² As such, it was part of a package. Negotiators came from an initial group of about twenty countries, increased to approximately thirty; nearly half of the negotiators came from industrialized nations; the remaining hailed from developing countries. The representatives of developing nations were often trade negotiators with little or no prior exposure to IP law and few even had advanced legal training. This dissymmetry put them at a disadvantage when discussing detailed and arcane drafting points, especially those linked to the specific history of existing treaties such as the Berne and Paris Conventions.¹³

Some might argue that the dissimilarity in bargaining knowledge was enhanced by the negotiating process. In the first few months of 1990, a number of industrialized countries tabled, with little advance notice,¹⁴ draft legal texts of what they saw as the future TRIPS Agreement. Prior to the

developing countries in combination with other factors, including an open economy, foreign direct investment, and human capital development).

12. Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations, Apr. 15, 1994, 33 I.L.M. 1125, 1144-53 (1994) [hereinafter Results of the Uruguay Round]. For a detailed negotiating history, see Daniel Gervais, *The TRIPS Agreement: Drafting History and Analysis* (2d ed. 2003).

13. See Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1886, 25 U.S.T. 1341, 828 U.N.T.S. 221 [hereinafter Berne Convention]; Paris Convention for the Protection of Industrial Property, Mar. 20, 1883, 21 U.S.T. 1583, 828 U.N.T.S. 303 [hereinafter Paris Convention]; see also Paul J. Heald, *Mowing the Playing Field: Addressing Information Distortion and Asymmetry in the TRIPS Game*, 88 Minn. L. Rev. 249 (2003).

14. However, a draft TRIPS text (not as detailed), prepared by the private sector and a Washington, D.C., lawyer, had been in circulation since the mid-1980s. See Sell, *supra* note 10, at 96-120; Menescal, *supra* note 10, at 155.

tabling of these texts, the discussions had focused on identifying existing norms and possible trade-related gaps therein, but the emerging outline of a possible TRIPS result had essentially been at the level of principles, not legal texts. The draft legal texts, which emanated from the European Community, the United States, Japan, Switzerland, and Australia,¹⁵ foreshadowed a detailed agreement covering all IP rights then in existence, even the seldom used *sui generis* protection for computer chips. The proposals also included detailed provisions on the enforcement of those rights before national courts and customs authorities and a provision bringing future TRIPS disputes under the General Agreement on Tariffs and Trade ("GATT")/WTO dispute-settlement umbrella.¹⁶ These proposals were far from obvious in light of the limited mandate of the TRIPS negotiating group.¹⁷

As a reaction, more than a dozen developing countries¹⁸ proposed another "legal" text, much more limited in scope, with few specific normative aspects. They insisted on the need to maintain flexibility to implement economic and social development objectives. In retrospect, some developing countries may feel that the Uruguay Round Secretariat did them a disservice by preparing a "composite" text, which melded all industrialized countries' proposals into what became the "A" proposal, while the developing countries' text became the "B" text.¹⁹ The final Agreement mirrored the "A" text. As such, it essentially embodied norms that had been accepted²⁰ by industrialized countries. The concerns of developing countries were reflected in large part in two provisions—Articles 7 and 8.

In most cases, TRIPS negotiators incorporated existing international norms by reference. Those norms were altered only to the extent that there

15. See Gervais, *supra* note 12, at 16-17. The U.S. and E.C. text were suggested by private interest groups funded mostly from the pharmaceutical and entertainment industries. See Sell, *supra* note 10, at 96; see also Jagdish Bhagwati, In Defense of Globalization 182-85 (2004).

16. The lack of a dispute resolution mechanism on the international level (state-state) was the main problem in enforcing obligations under the Berne Convention and the Paris Convention. See Gervais, *supra* note 12, at 10. The World Trade Organization ("WTO") dispute-settlement mechanism applies only to the disputes between states. See Results of the Uruguay Round, *supra* note 12, arts. XI, XII.

17. See World Trade Organization, Ministerial Declaration of 20 September 1986, MIN(86)/W/19, 25 I.L.M. 1623 (1986), available at http://www.sice.oas.org/trade/Punta_e.asp. (Punta del Este Declaration, launching the Uruguay Round)

18. Argentina, Brazil, Chile, China, Columbia, Cuba, Egypt, India, Nigeria, Peru, Tanzania, and Uruguay. Pakistan and Zimbabwe joined later on.

19. Then again, the Secretariat would perhaps respond that its mandate was to get to an agreement, which did in fact happen. Is it the Secretariat's function somehow to "compensate" for the respective clout of the countries involved and/or the degree of interest they took in various aspects of the Round?

20. In some cases, the norms were accepted just a few years beforehand, such as with the Berne Convention, ratified by the United States in 1989. See Berne Convention Implementation Act of 1988, Pub. L. No. 100-568, §§ 7-9, 102 Stat. 2853, 2857-59 (codified as amended at 17 U.S.C. 101 (2000)).

was a “consensus” that they should be updated.²¹ This is true of the Paris, Berne, and Washington treaties, which deal with copyright, industrial property (patents, designs, and trademarks), and integrated circuits, respectively.²² By and large, the so-called “North” thus imposed its then most-advanced set of norms on the “South.” In fact, major industrialized countries made relatively few concessions, despite their disagreements on some issues,²³ except the need to submit themselves to binding dispute settlement. By contrast, developing countries were forced to accept a package that they perhaps did not fully understand and yet contained a complete set of IP norms they now had to implement into their national law. The only true measures they obtained (in addition to Articles 7 and 8) were transitional periods to implement the Agreement. For most developing countries, transitional periods expired in January 2000.²⁴

In many cases, developing countries did this because of significant political concessions²⁵ in other sectors of the Round, such as tariffs on tropical fruit or textiles.²⁶ At the time, there were very few people arguing that TRIPS qua TRIPS was good in the short term for all developing countries. Those countries accepted it as part of a package. The IP component of that package, namely the TRIPS Agreement, adjusted the level of IP protection to what was the highest common denominator among major industrialized countries as of 1991.

21. See Gervais, *supra* note 12, at 68.

22. Treaty on Intellectual Property in Respect of Integrated Circuits, May 26, 1989, 28 I.L.M. 1477 (1989), available at http://www.wipo.int/treaties/en/ip/washington/pdf/trtdocs_wo011.pdf (treaty never entered into force but was used nonetheless as a foundation for TRIPS); Berne Convention, *supra* note 13; Paris Convention, *supra* note 13.

23. The United States could not accept the Rome Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations, which protects neighboring (or “related”) rights. Therefore, the wording of TRIPS only refers to Rome with respect to exceptions. See TRIPS, *supra* note 9, art. 14; see also Gervais, *supra* note 12, at 99-100. Also on this list are moral rights, the protection of biotechnological inventions (which was not settled in Europe at the time), plant varieties, and geographical indications. Given the comparable clout of the industrialized countries involved in discussions of these issues, they were solved either by introducing exceptions (as in Article 9 on moral rights or Article 27 for biotechnology) or by rather vague undertakings to negotiate further, as in Article 24 (concerning geographical indications). See TRIPS, *supra* note 9, arts. 9, 24, 27.

24. The transitional period for pharmaceutical patents has been extended until 2016 for least-developed countries in the Doha Declaration. See *infra* note 115 and accompanying text.

25. For an interesting empirical analysis of how and why developing countries adopt higher intellectual property (“IP”) norms (in many cases not because they believe they need or will benefit from them), see Robert L. Ostergard Jr., *The Development Dilemma: The Political Economy of Intellectual Property Rights in the International System* (2003).

26. A key difference between the WTO and organizations such as World Intellectual Property Organization (“WIPO”) is that concessions are made in WTO negotiations across negotiating sectors. For example, IP policy issues may be “abandoned” for lower tariffs on cotton or coffee. Interestingly, these issues are sometimes linked. The protection of IP rights in agricultural products, such as seeds, is becoming an increasingly important issue. See World Bank, *Intellectual Property Rights in Agriculture: The World Bank’s Possible Future Role in Assisting Borrower and Member Countries* 62 (Uma Lele et al. eds., 1999).

Some might say there is a certain degree of irony in TRIPS. The multinational companies that successfully lobbied to establish a linkage between IP and trade, first in the domestic U.S. context and then in the WTO,²⁷ did so because of their need to increase profit and markets or, to put it differently, to maximize rent extraction and increase the number of foreign territories into which they could consider expanding. Imposing this harsh medicine on developing countries created difficult situations, especially in poorer nations. However, it also created, or will lead to the emergence of, new competitors for the same companies that lobbied for TRIPS, as more developing nations at the receiving end of technology transfers and inward FDI develop the ability to innovate and compete. Combined with a healthy dose of economic nationalism,²⁸ the medium-term impacts of TRIPS and related measures, such as free-trade agreements and bilateral investment treaties, the purpose of which are to bring developing countries into the Western IP system,²⁹ are certainly worth pondering. Consider Japan after World War II and now, or China in 2000 and China circa 2025.

Then again, under pressure to increase profits and shareholder value, the multinational companies that sowed the TRIPS seed probably had no choice but to pursue this course of action. A cynic might add that it also explains a possible tendency on the part of some of those companies—and the United States Trade Representative (“USTR”) in bilateral agreements—not to accompany TRIPS implementation with strong measures destined to optimize local research, development, and innovation in developing countries.³⁰ Rather, those companies could consider these countries as new export markets, and lower-cost production centers, while maintaining the technological superiority of the West, and, hence, continued economic dominance.³¹ But even if that is the plan, and a totally understandable one from a business standpoint,³² the powers of innovation,³³ once unleashed,

27. See *supra* note 4 and accompanying text.

28. See Kenneth J. Vandeveld, *The Political Economy of a Bilateral Investment Treaty*, 92 *Am. J. Int'l L.* 621, 621-23 (1998).

29. See Ruth L. Okediji, *The International Relations of Intellectual Property: Narratives of Developing Country Participation in the Global Intellectual Property System*, 7 *Sing. J. Int'l & Comp. L.* 315, 328-30 (2003).

30. See *infra* Part III.

31. See Suzanne Scotchmer, *Innovation and Incentives* 329 (2004). Suzanne Scotchmer points out that

intellectual property rights are no longer a way to encourage domestic innovation. They also become a strategic instrument to affect profit flows among nations. To affect profit flows favorably, each country wants the strongest possible protections in foreign countries, and the weakest possible protections for foreigners in its own domestic market.

Id.

32. See Robert M. Sherwood, *Some Things Cannot Be Legislated*, 10 *Cardozo J. Int'l & Comp. L.* 37, 39-40 (2002). Robert Sherwood states,

[A] robust intellectual property regime may indeed not be the objective sought for developing countries by some global elites. The TRIPS level of protection may serve their interests enough to protect their sales into those countries without

and if properly supported, may cut the dominance short.³⁴ For now, however, large exporting firms are the clearest winners.³⁵

B. Doha and the Public Health Issue

We are now in the midst of the Doha “Development” Round, which started in Qatar in November 2001.³⁶ The language of the Declaration adopted in Doha is a measure of the change (at the multilateral level at

requiring a level of protection sufficiently robust to encourage local firms and individuals to conduct research and make inventions. In other words, from their perspective, half a loaf for developing countries is just fine. Another way of putting this is to suggest that developing countries are asked by TRIPS to go only half way in protecting intellectual property (primarily the intellectual property of others) without going far enough to fully encourage their own inventors and investors to build national intellectual property prowess.

Id. The recent efforts to implement “TRIPS Plus” protection would seem to contradict the assertion that higher IP norms are not being pushed for fear of fostering innovators and competitors in developing countries. However, by not disclosing the “secret formula” that shows how IP norms form part of a broader knowledge optimization strategy—a point developed in Part III.B, *infra*—developed countries try to ensure continued technological dominance.

33. See Robert M. Sherwood, *Global Prospects for the Role of Intellectual Property in Technology Transfer*, 42 IDEA 27, 34 (2002) (“[R]obust protection will release a great deal of energy into the economies of many of these countries.”).

34. From this perspective, the end result of TRIPS for many developing countries, and global welfare, would be very positive overall, especially compared with otherwise bleak economic outlooks. See Michael P. Ryan, *Knowledge-Economy Elites, the International Law of Intellectual Property and Trade, and Economic Development*, 10 Cardozo J. Int’l & Comp. L. 271 (2002). In his conclusion, Michael Ryan notes,

In the foreword to the 1998/99 *World Development Report: Knowledge for Development*, World Bank president James Wolfensohn states that “economies are built not merely through the accumulation of physical capital and human skill, but on a foundation of information, learning, and adaptation” and declares that in this new world economy that the “globalization of trade, finance, and information flows is intensifying competition, raising the danger that the poorest countries and communities will fall behind more rapidly than ever before.” . . . The WDR recommends that closing knowledge gaps depend upon (1) the acquisition of knowledge through trade, foreign direct investment, and licensing, (2) the absorption of knowledge through education, and (3) the communication of knowledge through advanced information technologies. Developing countries intent upon closing knowledge gaps and reducing information problems will do so with the help [of] intellectual property institutions—trademark to facilitate consumer knowledge, patent to facilitate technology transfer, copyright to facilitate literary, artistic, and informational expression.

Id. at 303.

35. See Evelyn Su, *The Winners and the Losers: The Agreement on the Trade-Related Aspects of Intellectual Property Rights and Its Effects on Developing Countries*, 23 Hous. J. Int’l L. 169, 214 (2000).

36. World Trade Organization, Ministerial Declaration of 14 November 2001, WT/MIN(01)/DEC/1, 41 I.L.M. 746 (2002), available at http://www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_e.htm [hereinafter Doha Declaration]. On the Doha process generally, see Gervais, *supra* note 12, at 43-51. See also L. Danielle Tully, Note, *Prospects for Progress: The TRIPS Agreement and Developing Countries After the DOHA Conference*, 26 B.C. Int’l & Comp. L. Rev. 129 (2003).

least) since 1994. In the three paragraphs concerning TRIPS, there are scant hooks on which to hang demands to increase IP protection.

First, paragraph 17 states that TRIPS should be implemented “in a manner supportive of public health, by promoting both access to existing medicines and research and development into new medicines”³⁷ In the following paragraph, the Declaration addresses a mostly North-North issue, the completion of the negotiations on geographical indications on wines and spirits.³⁸ The third and perhaps most well-known of the paragraphs instructs the TRIPS Council to “examine, *inter alia*, the relationship between the TRIPS Agreement and the Convention on Biological Diversity, the protection of traditional knowledge and folklore,”³⁹ and other new developments. In undertaking this work, the Declaration says, “the TRIPS Council shall be guided by the objectives and principles set out in Articles 7 and 8 of the TRIPS Agreement⁴⁰ and shall take fully into account the development dimension.”⁴¹ In other words, apart from the possible increase in protection of names of wines and spirits, the Doha Declaration essentially reflects the concerns of developing countries. The first paragraph insists on the balance between the need for access to IP and its protection. Some might consider it as a philosophical underpinning for ongoing discussions.

The separate Declaration on the TRIPS Agreement and Public Health,⁴² also adopted at Doha, emphasizes what had already been said in the Declaration itself—that the TRIPS Agreement should not prevent WTO Members from taking measures to protect public health. Such an interpretation means that the TRIPS Agreement should be interpreted in light of its objective and purpose, as expressed in the Agreement itself: “Each Member has the right to grant compulsory licenses and the freedom to determine the grounds upon which such licenses are granted”;⁴³ “[e]ach member has the right to determine what constitutes a national emergency or other circumstances of extreme urgency” (where public health crises may represent national emergency);⁴⁴ and “[t]he effect of the provisions in the TRIPS Agreement that are relevant to the exhaustion of intellectual property rights is to leave each Member free to establish its own regime for such exhaustion without challenge, subject to the [Most Favored Nation] and national treatment provisions of Articles 3 and 4.”⁴⁵

37. Doha Declaration, *supra* note 36, para. 17.

38. *Id.* para. 18.

39. *Id.* para. 19.

40. See TRIPS, *supra* note 9, art. 7, 8.

41. Doha Declaration, *supra* note 36, para. 19.

42. World Trade Organization, Ministerial Declaration on the TRIPS Agreement and Public Health of 14 November 2001, WT/MIN(01)/DEC/2, 41 I.L.M. 755 (2001), available at <http://docsonline.wto.org/>.

43. *Id.* para. 5(b).

44. *Id.* para. 5(c).

45. *Id.* para. 5(d).

While the purpose of the Declaration is rather self-evident, the importance of patents in preventing or reducing access to life-saving pharmaceuticals is not. Patents may be more a part of the problem than of the solution for certain developing countries coping with HIV or other epidemics, and the Declaration may help them overcome that obstacle. Yet, while a compulsory license should reduce patent (royalty) costs, it does not eliminate the production costs or the problems associated with distribution and timely administration of the medicines.⁴⁶

After intensive and difficult negotiations, the WTO General Council adopted the *Implementation of Paragraph 6 of the Doha Declaration on the TRIPS Agreement and Public Health* in 2003.⁴⁷ This will allow, under certain conditions, WTO members to export generic versions of drugs used to treat diseases such as HIV/AIDS to countries that can neither afford nor manufacture these pharmaceuticals. The Declaration is imperfect,⁴⁸ but my point here is to draw attention to the process, which was designed to take the needs of developing countries into account, not to criticize the result.

46. See, e.g., Amir Attaran & Lee Gillespie-White, *Do Patents for Antiretroviral Drugs Constrain Access to AIDS Treatment in Africa?*, 286 J. Am. Med. Ass'n. 1886, 1886-1906 (2001); Srividhya Ragavan, *The Jekyll and Hyde Story of International Trade: The Supreme Court in PhRMA v. Walsh and the TRIPS Agreement*, 38 U. Rich. L. Rev. 777 (2004).

47. World Trade Organization, Decision of the General Council of 30 August 2003, WT/L/540 (2003), available at http://www.wto.org/english/tratop_e/trips_e/implem_para6_e.htm; see also Carlos M. Correa, *Supplying Pharmaceuticals to Countries Without Manufacturing Capacity: Examining the Solution Agreed Upon by the WTO on 30th August, 2003*, 1 J. Generic Meds. 105-19 (2004).

48. See Bryan C. Mercurio, *TRIPS, Patents, and Access to Life-Saving Drugs in the Developing World*, 8 Marq. Intell. Prop. L. Rev. 211, 236-37 (2004) ("Unfortunately, as drafted, several paragraphs of the Implementation Agreement lend themselves to the possibility of abuse or are otherwise unsatisfactory and potentially destabilizing to the entire system of compulsory licensing."). Interestingly, as of April 2005, no country had made the necessary notification to the WTO Secretariat to be able to invoke the Decision. See Thomas F. Cotter, *Market Fundamentalism and the TRIPS Agreement*, 22 Cardozo Arts & Ent. L.J. 307, 310-19 (2004); K.M. Gopakumar, *The WTO Deal on Cheap Drugs: A Critique*, 7 J. World Intell. Prop. 99 (2004); Heald, *supra* note 13; Duncan Matthews, *WTO Decision on Implementation of Paragraph 6 of the Doha Declaration on the TRIPS Agreement and Public Health: A Solution to the Access to Essential Medicines Problem?*, 7 J. Int'l Econ. L. 73 (2004). For a view saying that the Declaration goes too far in favor of developing countries and acts as a disincentive to research, see Alan O. Sykes, *TRIPS, Pharmaceuticals, Developing Countries, and the Doha "Solution"*, 3 Chi. J. Int'l L. 47 (2002).

C. TRIPS and Traditional Knowledge

The protection of traditional knowledge⁴⁹ has been discussed in international fora over the last few years;⁵⁰ however, the Doha declaration has now put it at center stage.⁵¹ There are several reasons for the sudden move of this issue to the forefront. First, a large number of countries believe that, until now, they have not derived great benefits from "traditional" forms of IP, yet they find themselves rich with traditional knowledge, especially genetic resources and folklore. They would like to exploit these resources, and several major companies share this interest. The second reason is the growing political importance of aboriginal communities in several countries. While pharmaceutical and biotechnological companies are examining ways to exploit indigenous medicinal knowledge, plants, and other resources that are often found in developing countries, the Internet is progressively allowing creators of folklore or folklore-based copyrighted material to disseminate their material worldwide at a very low cost.

The protection of traditional knowledge, folklore, and genetic resources is far from obvious, and raises fundamental questions about the current IP

49. Traditional knowledge is a shorter version of "traditional knowledge, innovations and practices." See, e.g., The United Nations Convention on Biological Diversity, June 5, 1992, 1760 U.N.T.S. 143, 31 I.L.M. 818, art. 8(j), available at <http://www.biodiv.org/doc/legal/cbd-en.pdf> [hereinafter The Convention on Biological Diversity]. The Draft U.N. Declaration on the Rights of Indigenous Peoples uses the expression "indigenous knowledge, cultures and traditional practices." Draft United Nations Declaration on the Rights of Indigenous Peoples, at pmbl., U.N. Comm'n on Hum. Rts., 46th Sess., 36th mtg., U.N. Doc. E/CN.4/1995/2, E/CN.4/Sub.2/1994/56 (Oct. 28, 1994), reprinted in 34 I.L.M. 541, available at <http://www.unhchr.ch/indigenous/main.html>. In its more recent documents, WIPO uses the expression "traditional knowledge, innovations and creativity." World Intell. Prop. Org., Intellectual Property Needs and Expectations of Traditional Knowledge Holders, WIPO Report on Fact-finding Missions on Intellectual Property and Traditional Knowledge (1998-1999), at 17 (2001), available at <http://www.wipo.int/tk/en/tk/ffm/report/final/pdf/part1.pdf>. Traditional knowledge includes a broad range of subject matters, for example traditional agricultural, biodiversity-related and medicinal knowledge and folklore. See Daniel Gervais, *Traditional Knowledge & Intellectual Property: A TRIPS-Compatible Approach*, 2005 Mich. St. L. Rev. 137.

50. For WIPO activities in this area, see generally WIPO, <http://www.wipo.int/tk/en/> (last visited Oct. 17, 2005). See also Aaron Cosbey, *The Sustainable Development Effects of the WTO TRIPS Agreement: A Focus on Developing Countries* (1999), available at http://www.tradeobservatory.org/library.cfm?filename=Sustainable_Development_Effects_of_the_WTO_TRI.htm; Chakravarthi Raghavan, *ASEAN for Protecting Indigenous/Traditional Knowledge*, Third World Network, May 5, 2000, available at <http://www.twinside.org.sg/title/asean.htm>; John Mugabe, *Intellectual Property Protection and Traditional Knowledge: An Exploration in International Policy Discourse*, Nov. 1998, <http://www.wipo.int/tk/en/hr/paneldiscussion/papers/pdf/mugabe.pdf>.

51. Paragraph 19 reads in part as follows: "[Ministers] instruct the Council for TRIPS, in pursuing its work program . . . to examine, *inter alia*, the relationship between the TRIPS Agreement and the Convention on Biological Diversity, the protection of traditional knowledge and folklore, and other relevant new developments raised by Members pursuant to Article 71.1." Doha Declaration, *supra* note 36.

framework, itself exclusively a product of evolution in the Western world.⁵² In addition to posing questions about notions of authorship, work, utility, novelty,⁵³ public domain, etc., certain observers suggest that the nature of the exclusive rights and the underlying economic theories based on incentive and reward are misplaced. Traditional knowledge, they argue, is centered around respect, not innovation. It is noncommercial in nature and does not seek to expand the public domain.⁵⁴ And while existing legal rules may be used to protect certain forms of traditional knowledge, important potential conflicts remain.⁵⁵

This explains why the debate on these issues is essentially twofold. It consists, first, of a criticism of current rules and, second, of proposals for specific, *sui generis* protection of traditional knowledge.⁵⁶ In the latter case, in addition to the development of treaty provisions under the aegis of WIPO⁵⁷—which could serve, at least initially, on a regional basis—work in the Doha Round might lead to political recognition of the validity of some of the demands made by developing countries rich in traditional knowledge.⁵⁸

II. ECONOMICS

A. Recent Surveys

This section examines a number of recent analyses of available empirical evidence about the impact of IP protection. Clearly, the analysis is far from exhaustive. It only tries to identify trends. It is also worth noting that, in

52. See Daniel Gervais, *Spiritual But Not Intellectual? The Protection of Sacred Intangible Traditional Knowledge*, 11 *Cardozo J. Int'l & Comp. L.* 467 (2003); Gervais, *supra* note 49.

53. See Heald, *supra* note 13, at 275-79.

54. See Michael H. Davis, *Some Realism About Indigenism*, 11 *Cardozo J. Int'l & Comp. L.* 815, 818 (2003) ("The claims that the indigenous have a right to share in the profits of the use of their cultural information certainly smacks of some moral claims, and thus gains some apparent legitimacy. It is also consistent with the classical commercial goals of IP. But the subject matter, of course, is not consistent with IP—it is not innovative, it exists in the public domain, and thus IP protection serves none of the classical purposes of IP.")

55. See Jean Raymond Homere, *Intellectual Property Rights Can Help Stimulate the Economic Development of Least Developed Countries*, 27 *Colum. J.L. & Arts* 277 (2004); see also Daniel Gervais, *The Internationalization of Intellectual Property: New Challenges from the Very Old and the Very New*, 12 *Fordham Intell. Prop. Media & Ent. L.J.* 929 (2002).

56. See Paul Kuruk, *Bridging the Gap Between Traditional Knowledge and Intellectual Property Rights: Is Reciprocity an Answer?*, 7 *J. World Intell. Prop.* 429 (2004).

57. See, e.g., World Intellectual Prop. Org., *Draft Provisions on the Protection of Traditional Knowledge* (2005), available at http://www.wipo.int/tk/en/consultations/draft_provisions/draft_provisions.html (last visited Oct. 17, 2005); World Intellectual Prop. Org., *Draft Provisions on the Protection of Traditional Cultural Expressions/Folklore* (2005), available at http://www.wipo.int/tk/en/consultations/draft_provisions/draft_provisions.html (last visited Oct. 17, 2005).

58. See generally Gervais, *supra* note 49.

contrast to the very large number of studies dealing with the impact of IP protection of one type or another in major industrialized nations, there is a relative dearth of empirical analyses of the nature and impact of IP in developing economies.

Studies, however, are starting to emerge. Those consulted in the preparation of this paper⁵⁹ offer a blurred and complex picture of the advantages of higher IP protection in developing economies. A simple equation cannot be drawn between an increase in trade following the introduction of TRIPS-compatible IP protection, on the one hand, and economic development on the other, especially when measured in terms of welfare increases.⁶⁰ There are, however, at least two indicators that are helpful to analyze the impact of increasing protection, namely (a) the increase of trade flows in goods that include a significant IP component (as compared to the physical value of the material and components—for example, a music CD or a patented pharmaceutical molecule; such areas may be referred to as “intellectual property sensitive”); and (b) the increase in FDI concerning goods or services that require a high level of IP protection. It is essential to measure both because, to a certain extent, they cancel each other out: a company in country A (export) may have the ability to send goods to country B, but it may instead opt for local production (under license) in country B. Their analysis is based on data available from eighty-nine countries. Their main conclusion is that higher levels of IP protection are useful in areas other than fuel (and, presumably,

59. Some of the more notable, recent, and non-country-specific efforts include: U.K. IPR Commission Report, *supra* note 1; Intellectual Property and Development (Carsten Fink & Keith E. Maskus eds., 2004); World Bank, *The Uruguay Round and the Developing Economies* (Will Martin & L. Alan Winters eds., 1995), available at <http://econ.worldbank.org>; Suzanne Scotchmer, *The Political Economy of Intellectual Property Treaties*, 20 *J. L. Econ. & Org.* 415, 435-36 (2004). Suzanne Scotchmer states,

National treatment increases incentives to innovate, especially in an environment where local markets are not large enough to support invention. However, national treatment also creates problems. . . . [I]t can lead to an asymmetry where, for a particular subject matter, one country protects all innovation that takes place in the member states, and consumers in the other member states free ride. But for subject matters that do not require extensive protection, there is a more natural and more equitable asymmetry, which national treatment does not permit. The more natural solution would be for each country to protect its own innovators, and for countries to exchange spillover benefits.

Scotchmer, *supra*, at 435-36; *see also* Org. for Econ. Co-operation and Dev., *OECD Science, Technology and Industry Outlook 2004* (2004); Org. for Econ. Co-operation and Dev., *Patents, Innovation and Economic Performance: OECD Conference Proceedings* (2004).

60. Carsten Fink & Carlos A. Primo Braga, *How Stronger Protection of Intellectual Property Rights Affects International Trade Flows*, in *Intellectual Property and Development*, *supra* note 59, at 21 (“The implications of IPRs for economic welfare are complex. The simple fact that trade flows rise or fall in response to tighter IPRs is not sufficient for drawing conclusions regarding economic welfare. Both static and dynamic effects need to be considered.”). Obviously, an increase in overall economic development may not translate into a reduction of poverty. Other factors, such as wealth distribution and corruption are relevant. *See, e.g.*, Bhagwati, *supra* note 15, at 54-60, 199-202.

raw resources pre-value-added transformation) and, surprisingly, high technology.⁶¹

The traditional view, supported by case studies in countries such as post war Japan, is that high IP protection, especially of patent rights, will lead to higher FDI.⁶² However, in a recent analysis of the FDI component and its relation to IP, Professor Keith Maskus concluded that many other factors influence FDI and technology transfer decisions, including market liberalization and deregulation, technology development policies, and competition regimes.⁶³ Foreign firms invest internationally if there are location advantages and if it is more profitable for them to produce in that country rather than licensing their IP. Firms are more apt to invest in countries that implement strong IP protections (and to bring their IP or allow for licenses in such countries). Transnational firms may also choose to invest in vertical FDI (where different plants produce products that can be used by the plant "above" it as an input to their product).⁶⁴

The conclusions of Professor Maskus's study⁶⁵ are based on data from the International Monetary Fund showing increases in inward and outward FDI between the years 1987 and 1995. Pre-2000 data may not offer ideal

61. In fact, those results seem at odds with Mansfield's 1994 study of U.S. business executives, which found that IP protection influenced mostly executives in high tech industries. See Mansfield, *supra* note 10. For a discussion, see Paul J. Heald, *Misreading a Canonical Work: An Analysis of Mansfield's 1994 Study*, 10 J. Intell. Prop. L. 309 (2003). Maskus and Fink suggest five possible explanations as to why there is no measurable positive impact in the case of high technology goods: 1) Strong market power may offset the positive market expansion effects of higher protection; 2) higher foreign direct investment (FDI) may lower international trade (as discussed above); 3) it is possible that the impact of intellectual property protection was not accurately measured; 4) factors in the destination country (country of export) may matter more than intellectual property (including first mover advantage); and 5) finally, tariff and non-tariff barriers may impede trade flows. See Intellectual Property and Development, *supra* note 59, at 28.

62. See Keith E. Maskus, *Intellectual Property Rights and Economic Development*, 32 Case W. Res. J. Int'l L. 471, 481-85 (2000); see also Keith E. Maskus & Christine McDaniel, *Impacts of the Japanese Patent System on Productivity Growth*, 11 Japan & World Econ. 557 (1999).

63. Keith E. Maskus, *Intellectual Property Rights in Encouraging FDI and Technology Transfer*, in Intellectual Property and Development, *supra* note 59, at 70-71; see also Carsten Fink, *Patent Protection, Transnational Corporations, and Market Structure: A Simulation Study of the Indian Pharmaceutical Industry*, in Intellectual Property and Development, *supra* note 59, at 250-51. In his summary of a study by Ginarte and Park, Juan C. Ginarte & Walter G. Park, *Determinants of Patent Rights: A Cross-National Study*, 26 Res. Pol'y 283, 285-86 (1997), Professor Maskus notes that those authors

found that the strength of patent rights across countries and over time depended positively on real GDP per capita, the share of R&D in GDP, openness to international trade, and a measure of the freedom of markets from arbitrary and non-transparent government regulation. Human capital, measured by the secondary school enrollment ratio in an earlier period, was a positive and marginally significant contributor to patent rights.

Maskus, *supra* note 62, at 477.

64. 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, 172-73 (1998).

65. See Maskus, *supra* note 63.

parameters to do a full analysis of the current situation. In many cases, IPR protection increased sharply after the TRIPS Agreement entered into force in developing countries, which, except for the least-developed ones, had until January 2000 to comply.⁶⁶ Interestingly, in China's case, the date of TRIPS compliance coincided with its becoming a WTO member on December 11, 2001.⁶⁷ The author of a study dealing with China agreed with Edwin Mansfield⁶⁸ that there was only a weak correlation between higher IP and increased FDI in that market.⁶⁹ Another developing-country-specific study that compared African countries to India and China found significantly lower FDI numbers in Africa despite higher levels of IP protection.⁷⁰

Another study, this one concerning the situation of FDI in so-called "transition economies,"⁷¹ is perhaps more illuminating because those countries were, for the most part, closed to FDI until approximately 1990. The study confirmed intuitive conclusions, in particular that FDI in IP sensitive areas is discouraged when IP protection is weak, and that, across all sectors, low IPR protection encourages foreign firms to focus on distribution rather than local production.⁷²

In the specific area of pharmaceuticals, available data analyzed in another study illustrates that, at least for the large Indian market, the introduction of patent protection is likely to lead to increased research and development, price increases, and related welfare effects. However, research also shows that only 10.9% of the top five hundred pharmaceuticals in this market are patented. Additionally, the government retained certain tools including

66. TRIPS, *supra* note 9, art. 65. For patents on pharmaceuticals in countries where patents were previously unavailable for inventions of that type, the transitional period ended on January 1, 2005. *See id.* art. 65(4).

67. *See* World Trade Org., Understanding the WTO 112 (3d ed. 2003), available at http://www.wto.org/english/thewto_e/whatis_e/tif_e/understanding_e.pdf.

68. *See* Mansfield, *supra* note 10.

69. *See* Yahong Li, *Pushing For Greater Protection: The Trend Toward Greater Protection of Intellectual Property in the Chinese Software Industry and the Implications for Rule of Law in China*, 23 U. Pa. J. Int'l Econ. L. 637, 638-41 (2002); Keith E. Maskus, *The Role of Intellectual Property Rights in Encouraging Foreign Direct Investment and Technology Transfer*, 9 Duke J. Comp. & Int'l L. 109, 115-19 (1998) (noting that FDI increased ten-fold in China prior to the introduction of TRIPS-compatible norms); Mikhaelle Schiappacasse, *Intellectual Property Rights in China: Technology Transfers and Economic Development*, 2 Buff. Intell. Prop. L.J. 164 (2004); Peter K. Yu et al., *China and the WTO: Progress, Perils, and Prospects*, 17 Colum. J. Asian L. 1 (2003).

70. *See* Ragavan, *supra* note 46, at 789; Sherwood, *supra* note 33, at 33-34 (emphasizing the need for proper enforcement mechanisms).

71. Essentially, these are countries in Central and Eastern Europe that formed part of the former Soviet bloc. Article 65(3) of the TRIPS Agreement refers to them as "[m]ember[s] which [are] in the process of transformation from a centrally-planned [economy] into a market, free-enterprise economy and which [are] undertaking structural reform of [their] intellectual property system[s] . . ." TRIPS, *supra* note 9.

72. *See* Beata Smarzynska Javorcik, *The Composition of Foreign Direct Investment and Protection of Intellectual Property Rights: Evidence from Transition Economies*, 48 Eur. Econ. Rev. 39 (2004).

price controls and, in cases where Article 31 of TRIPS allows, compulsory licenses.⁷³

The U.K. IPR Commission Report⁷⁴ presents a picture consistent with the above findings but also stresses that it is important not to consider developing countries as a homogeneous group.⁷⁵ In fact, a fairly well developed sequencing phenomenon exists. In an impoverished country, there is little rent that foreign firms can extract. Furthermore, there is scarce technology to copy or improve on high technology goods, and it is unlikely that the country in question can benefit from technology transfer. FDI is unlikely because of factors unrelated to IP, such as infrastructure, or absence of a viable domestic market.⁷⁶ International firms take notice when a country becomes both a piracy threat and a potential market, even if the threat is limited to a fairly small percentage of the population.⁷⁷ While countries that implement IP norms may benefit from increased local development and inward FDI, they may also incur job losses in established copycat industries and welfare costs associated with higher local prices.⁷⁸ However, consumers benefit from knowing they are purchasing the genuine product, especially in areas where the quality of the goods is essential.⁷⁹

In sum, economic analysis tends to demonstrate that sufficient IP protection is an essential component of increased inward FDI and trade flows in IP-sensitive goods for countries above a certain economic development threshold. The trade regime (especially tariffs and non-tariff barriers), tax, and competition laws are also potent influences.

B. Analysis

There is an important difference between increased trade flows (in this case in the form of imports) and inward FDI when economic development is taken into account. When higher IP rules allow foreign firms to begin exporting IP-sensitive goods and services to a country, local consumers and industries gain lawful access to those products and services. This may result in welfare gains. This may also, however, lead to price increases, especially when goods whose status changes to “pirate” or “counterfeit” after the introduction of IPR protection are displaced by genuine goods sold at a higher price. Increased trade flows may lead to new jobs in distributorships and the retail sector, but these are likely to be low-skilled, low-paying positions. There also may be significant gains in terms of product quality and reliability, most notably in the area of pharmaceuticals.

73. See Fink, *supra* note 63, at 250-51.

74. See U.K. IPR Commission Report, *supra* note 1.

75. *Id.* at 1-2.

76. See *supra* note 11 and accompanying text.

77. For a discussion on the situation in Kenya, see J.M. Migai Akech, *The African Growth Opportunity Act: Implications for Kenya's Trade and Development*, 33 N.Y.U. J. Int'l L. & Pol. 651 (2001).

78. See Heald, *supra* note 13; see also Maskus, *supra* note 62, at 480-81.

79. See Maskus, *supra* note 62, at 487-88.

Inward FDI is a more powerful economic development lever than trade. It transfers technology and usually creates jobs requiring a higher skill level. This may be the case for the manufacturing of technology-intensive goods, which requires engineering and quality-control positions, as well as management and other softer skill sets. In the best-case scenario, some research and development jobs are created, which may have spillover effects in areas such as higher education, or local laboratories.

Inward FDI also informs the attitude a government should take towards publicly funded and university-based research. The U.S. Bayh-Dole Act⁸⁰ is a good example. The Act

arguably constitutes the single most important event, as it expanded both the range of entities patenting inventions and the types of inventions being patented. Following passage of the Bayh-Dole Act, universities and research institutes increased their patent filings dramatically, further blurring the line between commercial and basic-science research.⁸¹

The Act, it has been argued, has led to a major increase in research and development at American universities.⁸² Yet, others argue that when all social costs are accounted for, the data suggests that an open approach would produce better overall effects.⁸³ Should governments err on the side of protection or, instead, protect the public domain? Should governments take the policy gamble of increasing protection to test whether it produces positive results without major or overwhelming negative externalities? Indeed, it may be easier to make IP *ex post facto* and adjust the framework, rather than look for a perfect model to merge from theoretical economic analysis. In addition, each sector of IP could be considered separately, and possibly sub-sectors: Should industrial machines, business models, biotechnology, and chemical agricultural products all be treated the same because they are protected by patents?

As to sector-specific impacts, in the absence of sufficient rights and enforcement options, one may reasonably conclude that in the copyright arena, music, films, and books are unlikely to be distributed and national cultural industries are unlikely to develop. In these areas, the gains generated by establishing sufficient protection are "unambiguous."⁸⁴ However, the introduction or beginning of enforcement of copyrights may also lead to the closure of businesses that rely on copying, thus displacing (mostly unskilled) workers. Ideally, some of these workers will be able to find work in the new, creative industry jobs made possible by the adequate

80. 35 U.S.C. §§ 200-212 (2000).

81. David E. Adelman, *A Fallacy of the Commons in Biotech Patent Policy*, 20 Berkeley Tech. L.J. 985, 989 (2005).

82. See Susan K. Finston, *The Relevance of Genetic Resources to the Pharmaceutical Industry—The Industry Viewpoint*, 8 J. World Intell. Prop. 141 (2005).

83. See Amy Kapczynski, Samantha Chaifetz, Zachary Katz & Yochai Benkler, *Addressing Global Health Inequities: An Open Licensing Approach for University Innovations*, 20 Berkeley Tech. L.J. 1031 (2005).

84. Keith E. Maskus, *Strengthening Intellectual Property Rights in Lebanon*, in *Intellectual Property and Development*, *supra* note 59, at 286, 289.

protection of copyrights.⁸⁵ Such jobs are likely to pay higher wages and stimulate creativity, while reducing the need felt by local creators to live in higher protection countries as exiles. In high technology sectors, such as the manufacturing of computer chips and advanced electronic components, the level of protection is less relevant due to the inability to reverse engineer and produce pirated versions and the market power of the main international players.⁸⁶

Trademark protection is an essential ingredient to generating higher inward FDI. The purpose of trademarks is manifold. Trademarks protect the public by indicating the source of goods and services so that purchasers can identify the desired level of quality and receive a similar product or consistent service over time. Trademarks protect the trademark owner against commercial misappropriation of the mark and/or the goodwill associated with the mark. The value of a mark stems from the mental link that is created over time in the minds of prospective buyers between particular goods or services and a particular source. Many people will buy a product or service because consciously or unconsciously they associate qualities such as value, excellence, or efficiency with the trademark. A strong trademark is invaluable because the ability of a mark to raise these associations directs a potential buyer towards a company's own product or service rather than those of a competitor. Trademarks are influenced both by sellers' perceptions about buyers' psychology and the public's marketing-influenced perceptions of how goods and services are differentiated. Trademarks also serve an informational purpose: The legal protection of marks gives companies an incentive to invest in making their marks more recognizable and easier to remember so consumers can more easily identify which particular good or service they want.

Introducing trademark protection will, as in the case of copyrights, lead to the closure of businesses producing counterfeit goods. That economic activity, however, could be replaced by jobs in distribution, retail, and franchises.⁸⁷ These are, however, often low-level, low-skilled jobs. Trademark protection will also benefit consumers who will have access to "genuine" goods, i.e., goods that come with the perceived assurance of quality associated with the mark via domestic or international advertising and reputation. Over time, the experience in product assembly, delivery, servicing, and management acquired through franchise and distributorship arrangements may be transferred to new, local businesses.

Patents are also directly relevant. Patents do not ensure that new products will be supplied in the short term. When patent protection is unavailable, products that would otherwise infringe a patent could be made available legally for the domestic market. In terms of FDI, however, the impact is exactly the opposite, because global firms relying on patent

85. *See id.* at 286-87.

86. *See Fink & Braga, supra* note 60, at 34.

87. *See Amir H. Khoury, The Effects of Trademarks on Arab Countries in the Middle East* (June 2004) (unpublished Ph.D. dissertation, University of Haifa) (on file with author).

protection need assurances about the level of protection and enforcement before considering any significant technology transfer. Fully exploiting a patent often requires expertise that is not fully disclosed in the published patent or patent application. Ongoing research and variants of the patented inventions may also exist. For this reason, firms also consider the level of protection of trade secrets for information that, for strategic or other reasons, is not disclosed in a patent. In fact, for certain process patents, even in the presence of a presumption that a product not previously available results from a new patented process,⁸⁸ many companies prefer not to disclose new processes in patent applications.⁸⁹ Direct patent-related inward FDI is often the best way to create high-paying, highly skilled jobs, and it is therefore highly sought after by many governments willing to go to great lengths to attract foreign firms.⁹⁰

From this standpoint, TRIPS was not only necessary to maximize the rent that could be extracted from emerging foreign markets, but it was also a difficult yet essential measure to jumpstart global economic development. Related beliefs hold that the misuse of “Western” IP was comparable to theft or “piracy” and that increased foreign revenues would lead to higher overall levels of research and development. IP as “policy castor oil” suggests that countries should overlook the distasteful aspects of introducing or increasing IP protection and enforcement in exchange for longer term economic health.⁹¹

A different and perhaps more cynical view of international IP—which may be very closely aligned with the actual view of business—is that the purpose of TRIPS is simply to enhance global welfare, not welfare measured by country or even by region. If multinational pharmaceutical, software, or entertainment firms can reap additional profits from developing nations, new goods and services will result due to higher investment in

88. Article 34(1) of the TRIPS Agreement reads in relevant part: “[I]f the subject matter of a patent is a process for obtaining a product, the judicial authorities shall have the authority to order the defendant to prove that the process to obtain an identical product is different from the patented process.” TRIPS, *supra* note 9, art. 34(1).

89. See A Patent System for the 21st Century 20-23 (Stephen A. Merrill et al. eds., 2004), available at <http://www.nap.edu/html/patentsystem/0309089107.pdf>.

90. See Javorcik, *supra* note 72, at 60.

91. A recent newspaper article articulated the following point:

By protecting marketing exclusivity, the industry says, the trade agreement [in this CAFTA, the Central American Free Trade Agreement] would also spur innovation and encourage pharmaceutical companies to register drugs in the smaller countries, ultimately helping to deliver the drugs to the needy. It is a philosophical argument that the Office of the U.S. Trade Representative has embraced. “Trade rules that protect innovation and research foster a system that produces the types of medicines that American health consumers and health consumers around the world use and need to fight diseases,” said Richard Mills, a spokesman for the trade office.

Stephanie Saul, *U.S. Drug Makers Win Little-Seen Victory in Trade Pact*, Int’l Herald Trib., July 2, 2005, at 10. One can readily discern that the higher level of protection (“TRIPS Plus”) will allow international pharmaceutical companies to extract higher rents from those countries. The article does not explain how “health consumers” in Central America would afford the new medicines or how the pact will help “deliver drugs to the needy.”

research and development, etc. Additional profits may benefit mostly consumers in richer countries, but still increase welfare when measured globally.

There is a countervailing view that IP norms should be fair to developing countries as well as more economically developed nations.⁹² Professor Alan O. Sykes argues that the gains to the developed countries could outweigh the developing countries' losses: "Even if Professor Scherer were right about the [negative] welfare impact of pharmaceutical patents on developing countries viewed in isolation, the odds that such patents will nevertheless enhance global welfare appear particularly favorable in this sector."⁹³

Sykes suggests that introducing high levels of IP protection in developing countries induces firms to invent products of particular interest to the developing countries (e.g., anti-malaria drugs) and to engage in technology transfer.⁹⁴ Without uniform rules, there may be a "collective action" problem. The problem arises because an individual developing country may benefit more if it chooses to have weak patent laws, while the other developing countries have strong patent laws; that way, an individual country can obtain the benefits of inducing the invention of products of particular interest to developing countries without having to pay the costs.⁹⁵ TRIPS solves the collective action problem by requiring all of the member nations to have strong IP protection. Sykes further argues that compulsory licensing reduces the pharmaceutical industry's incentive to undertake research into diseases that are endemic principally to the developing world.⁹⁶

In responding to Professor Sykes's arguments, Professor Thomas F. Cotter suggests,

Even in the presence of strong patent rights, the developing nations' willingness to pay may be so constrained that little incentive will exist anyway for the pharmaceutical companies to engage in much of this type of research and development. Indeed, most observers who have considered this issue have concluded that it will take much more than strong patent rights to induce this type of research. Even in the United States, it took the Orphan Drug Act⁹⁷ to make research into some drugs

92. For a critical assessment of this argument, see Frederic M. Scherer, *Industry Structure, Strategy and Public Policy* 362-66 (1996). See also Peter K. Yu, *From Pirates to Partners: Protecting Intellectual Property in China in the Twenty-First Century*, 50 Am. U. L. Rev. 131, 192-93 (2000).

93. Sykes, *supra* note 48, at 62.

94. *Id.* at 65-66.

95. *Id.*; see also Edmund W. Kitch, *The Patent Policy of Developing Countries*, 13 UCLA Pac. Basin L.J. 166, 169-78 (1994).

96. See Sykes, *supra* note 48, at 62-66; see also Shanker A. Singham, *Competition Policy and the Stimulation of Innovation: TRIPS and the Interface Between Competition and Patent Protection in the Pharmaceutical Industry*, 26 Brook. J. Int'l L. 363 (2002).

97. Under the Orphan Drug Act, 21 U.S.C. §§ 360aa-360ee (2000), the United States government provides funding, tax benefits, and exclusive marketing rights to drug companies undertaking research into diseases affecting relatively small numbers of people.

with relatively small demand profitable. Thus, even if the TRIPS Declaration marginally decreases the incentive to engage in research into tropical diseases, there remain (unfortunately) other obstacles that are much more significant; to argue against the Declaration on this ground is to let the tail wag the dog.⁹⁸

III. KNOWLEDGE

Many of the studies mentioned in Part II insist on the fact that sufficient and adequate IP protection is but one ingredient in a complex recipe to achieve a successful economic development soufflé. Put differently, IPR protection is essential, but in itself insufficient, to ensure growth. In fact, IP rules arguably benefit mostly major owners of IP who are largely concentrated in a few Western countries and Japan. Each country needs a comprehensive knowledge optimization strategy to successfully exploit IP to maximize its economic growth in areas that are information and IP intensive and to be able to produce goods and services with a higher ideational content (which is what IP rules tend to protect). The adequate protection of commercially or industrially relevant knowledge forms part of such a strategy.

If the above seems fair in light of the economic studies discussed in Part II, those studies are also illuminating by what they do not and perhaps cannot show. It is extremely difficult to isolate the importance of the IP factor in the growth of bilateral trade flows and FDI. It is even more difficult to determine the optimal level of protection. This is partly due to the fact that the TRIPS Agreement imposes global minimum standards, and there remain very few statistically significant options to compare various levels of protection below that floor. That problem certainly has theoretical significance in assessing the validity of econometric studies and the field of available (versus ideal) field of empirical data. However, a problem in theory actually forms part of the solution once we shift to policy setting.

The TRIPS Agreement is arguably the strongest normative vector in setting IP policy. WTO members cannot legislate below the TRIPS level without incurring the risk of dispute-settlement proceedings under the Dispute-Settlement Understanding (“DSU”),⁹⁹ and it is unlikely that TRIPS

See Kevin Outterson, *Pharmaceutical Arbitrage: Balancing Access and Innovation in International Prescription Drug Markets*, 5 Yale J. Health Pol’y L. & Ethics 193, 215-16 (2003).

98. Thomas F. Cotter, *Market Fundamentalism and the TRIPS Agreement*, 22 Cardozo Arts & Ent. L.J. 307, 335-36 (2004).

99. Understanding on Rules and Procedures Governing the Settlement of Disputes, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 2, Legal Instruments—Results of the Uruguay Round, 33 I.L.M. 1125 (1994), available at http://www.wto.org/english/docs_e/legal_e/28-dsu.pdf [hereinafter DSU]; see also Gervais, *supra* note 12, at 340-44. Not all countries are equal when it comes to the DSU. The E.U. and U.S. have resisted applying decisions of the DSU that found their legislation incompatible with their WTO obligations. The long-standing dispute between the E.U. and the so-called “dollar banana” countries is an example. See Appellate Body Report, *European*

norms will be diluted in the Doha Round.¹⁰⁰ Therefore, it would be pragmatically justified to take TRIPS as a given in the IP-policy equation.

The available flexibility in implementing the Agreement must be determined only as part of a comprehensive strategy. This Article argues below that integrating TRIPS norms into such a strategy is tactically sound and that TRIPS strikes an adequate balance if properly implemented, especially when compared to the emerging “TRIPS Plus” norms.¹⁰¹

The strategy outlined below is not a series of measures designed to nominally implement TRIPS rules or find loopholes to shrink the protection they offer. Proposed interpretations of Articles 27 and 30 of TRIPS¹⁰² and the fact that the Agreement in many cases imposes no clear rules as to the ownership of IPRs mean that a country can formally implement TRIPS while de-implementing parts of it through such legal “gimmickry” (though not illegitimately) and perhaps “get away with it” as far as the WTO dispute-settlement system is concerned. The objective of this Article is rather to suggest ways to optimize knowledge and economic development using TRIPS rules as an ingredient. This may involve some flexibility in the implementation process but only as part of a comprehensive strategy.

A. TRIPS Viewed as Part of the “Right Balance”

As mentioned, it is difficult and probably impossible on the basis of available empirical data to determine the optimal level of IP protection. Is the best term of protection for a patent twenty years, eighteen, or twenty-two? Or is it five or thirty-five? For copyright, is it ten years, life of the

Communities—Conditions for the Granting of Tariff Preferences to Developing Countries, WT/DS246/AB/R (Apr. 7, 2004) available at <http://docsonline.wto.org>. In the United States, a panel decision concerning the incompatibility of exceptions contained in § 110(5)(b) of the Copyright Act rendered in 2000 remains unimplemented as of this writing. See Richard Owens, *TRIPS and the Fairness in Music Arbitration: The Repercussions*, 25 Eur. Intell. Prop. Rev. 49, 49-54 (2003).

100. See Gervais, *supra* note 12, at 43-51.

101. See *infra* note 132 and accompanying text.

102. For example, UNCTAD recently suggested that

[t]he exclusions in Article 27:3 are framed more narrowly, yet again leave substantial room for interpretation. For example, Article 27:3(a) permits the exclusion of “therapeutic methods” for the treatment of humans. The use of pharmaceuticals is a method of therapy for treating human health conditions, and so arguably . . . a Member could exclude the use of drugs for medical treatment from patent protection.

United Nations Conference on Trade and Dev., Dispute Settlement, World Trade Organization, 3.14 TRIPS, at 20 (2003), available at http://www.unctad.org/en/docs/edmmisc232add18_en.pdf (prepared by Frederick M. Abbott, Florida State University College of Law, at the request of the United Nations Conference on Trade and Development). I do not share the view that a panel would agree with this interpretation. Regarding Article 30, the same report indicates that “[t]he ordinary meaning of the terms in Article 30 would appear to allow considerable flexibility to Members in adopting exceptions to the rights of patent holders,” *id.* at 22, which may create a sense of “flexibility” with which many panels may not agree.

author plus fifty or seventy years?¹⁰³ One would probably conclude that, for certain forms of invention or creation—indeed for specific inventions or works—a certain term is optimal, while a different one is more adequate in a different context.¹⁰⁴ This analysis could depend, for example, on the added value of the invention, which depends in turn on the size of its inventive step,¹⁰⁵ and the degree to which this step overlaps the predictable industrial or commercial applicability of the invention. One could add to the equation the degree of true competition in the industrial or economic sector impacted by the invention and, correlatively, whether there are dominant players by market share.

TRIPS, one could argue, is a valid instrument also because it only harmonizes national laws to a degree.¹⁰⁶ This is not the place for a summary of the content of TRIPS.¹⁰⁷ Evidently, it contains more than simple “wishes,” in contrast to many provisions of the Paris Convention.¹⁰⁸ A country must provide protection of copyrights, certain related rights, trademarks, industrial designs, certain geographical indications, patents on most classes of inventions, certain forms of confidential information, and, last, and in this case least, topographies of integrated circuits, in each case for a specified period of time. On the other hand, however, there is considerable flexibility in how the rights and protected subject matter are

103. See *Eldred v. Ashcroft*, 537 U.S. 186, 193 (2003). It has been argued that the current U.S. and European term of “life plus 70 years” is the economic equivalent of perpetual protection. See Christopher Sprigman, *Reform(alizing Copyright)*, 57 Stan. L. Rev. 485, 522 (2004). Christopher Sprigman writes:

The copyright term is now sufficiently long that the net present value to the rightsholder of a copyright is practically indistinguishable from what it would be under a perpetual term. In an amicus curiae brief submitted to the Supreme Court in support of the petitioners in *Eldred v. Ashcroft*, a group of economists that included Nobel Prize winners George Akerlof, Kenneth Arrow, James Buchanan, Ronald Coase, and Milton Friedman argued that the current, post-CTEA copyright term of life plus seventy years has a net present value that is 99.88% of the value of a perpetual term.

Id.

104. One *ex post* sign would be whether the invention is still actively being exploited at the expiration of the patent. However, if only inventions whose value had lapsed fell into the public domain, the societal value of granting a twenty-year monopoly would come into question. In the United States, there is a long history of extending the term of specific patents by private bills. See Caren L. Stanley, *A Dangerous Step Toward the Over Protection of Intellectual Property: Rethinking Eldred v. Ashcroft*, 26 Hamline L. Rev. 679, 694-5 (2003). Historically, the term of a patent was set by private bill until a standard term was introduced into federal law. See Thomas B. Nachbar, *Intellectual Property and Constitutional Norms*, 104 Colum. L. Rev. 272, 338-39 (2004).

105. In the area of pharmaceuticals, a difference is often made between pioneer drugs and so-called “me-too” drugs. The latter are variations on a molecule developed by another laboratory which tends to have the same physiological/therapeutic effect, but without infringing the “pioneer’s” patent. See *U.S. v. Generix Drug Corp.*, 460 U.S. 453 (1983).

106. See Jerome H. Reichman, *The TRIPS Agreement Comes of Age: Conflicts or Cooperation with the Developing Countries?*, 32 Case W. Res. J. Int’l L. 441 (2000).

107. See generally Gervais, *supra* note 12.

108. For a trademark-related example, see the Paris Convention, *supra* note 13, art. 6(1) (“The conditions for the filing and registration of trademarks shall be determined in each country of the Union by its domestic legislation.”).

defined,¹⁰⁹ owned,¹¹⁰ managed,¹¹¹ or subject to exceptions.¹¹² In the area of enforcement, the Agreement recognizes that the implementation in a given WTO member may be impacted by the availability of resources.¹¹³ United Nations Conference on Trade and Development (“UNCTAD”) published a detailed document on the flexibility of TRIPS.¹¹⁴ Another example is the delay until 2016 in protecting pharmaceuticals by patents granted to least-developed countries.¹¹⁵

Admittedly, developing economies typically need a different set of rules. As UNCTAD put it,

[E]xperience shows that there is a need for policy instruments specifically designed with the aim of helping countries at lower stages of development to converge on the levels of efficiency and affluence achieved by the more advanced economies, and to improve the welfare of all groups of the population. Making this the principle for policy design at both the domestic and the international level requires recognition of the fact that successful development and integration of the developing countries is in the mutual interest of all countries, as longer-term growth and trading opportunities of the more advanced economies also depend on the expansion of industrial capacity and markets in the poorer economies.¹¹⁶

Yet, I suggest that, as far as IP is concerned, there is sufficient policy-related “room to move” within TRIPS, even though the major “concession” to developing countries other than least-developed ones was a set of transitional periods, which primarily ended in January 2000 and in January 2005 for pharmaceutical patents.¹¹⁷

109. For example, while Article 27 states that WTO members must protect “inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application,” the terms “new,” “inventive step,” and “capable of industrial application” are not defined. See TRIPS, *supra* note 9, art. 27.

110. See Appellate Body Report, *United States – Section 211 Omnibus Appropriation Act of 1998*, paras. 215-21, WT/DS176/AB/R (Jan. 2, 2002), available at <http://docsonline.wto.org>.

111. For instance, rules as to the ownership of collective marks or whether and how copyright and related rights are to be managed (collectively or otherwise) are not explicitly mentioned in the Agreement.

112. Many exceptions are only limited by the “three-step test” contained in TRIPS Articles 13, 26(2), and 30. See Daniel J. Gervais, *Towards a New Core International Copyright Norm: The Reverse Three-Step Test*, 9 Marq. Intell. Prop. L. Rev. 1 (2005).

113. TRIPS, *supra* note 9, art. 41(5).

114. See *supra* note 102.

115. Council for Trade-Related Aspects of Intellectual Property Rights, *Extension of the Transition Period under Article 66.1 of the TRIPS Agreement for Least-Developed Country Members for Certain Obligations with Respect to Pharmaceutical Products*, IP/C/25 (July 1, 2002), available at http://www.wto.org/english/news_e/pres02_e/pr301_e.htm.

116. United Nations Conference on Trade and Dev., *Trade and Development Report 96* (2004), available at http://www.unctad.org/en/docs/tldr2004_en.pdf [hereinafter *Trade and Development Report*].

117. TRIPS, *supra* note 9, art. 65(2), (4). In the case of pharmaceutical patents, least-developed countries now have until 2016. See *supra* note 115 and accompanying text; see also Reichman, *supra* note 106, at 442 n.3.

Therefore, I suggest that countries should not “fight” TRIPS. They can use its built-in normative elasticity to reconcile the new norms to the extent possible with their industrial, cultural,¹¹⁸ legal, and economic parameters based on their determination of priorities. The purpose should not be to circumvent TRIPS, because by and large it incorporates a well-honed set of norms establishing structures of protection,¹¹⁹ the impact, use, and misuse of which have been extensively analyzed. In addition, local research and development efforts after years of FDI have transformed China as a major holder of domestically developed IP.

I suggest integrating TRIPS norms in a broader strategy. As with market openness, IP rules per se are a catalyst, at best. Part of that strategy includes accepting TRIPS as a given and perhaps, as some argue, as a common reference/defense point against TRIPS-plus demands made in bilateral discussions. That being said, TRIPS is not a static bundle of norms. It evolves with each panel and appellate body interpretation. It is also not to be read in “clinical isolation” from public international law.¹²⁰ Developing and other countries can thus coalesce to develop alternative sets of norms¹²¹ and include TRIPS and WTO rules in the broader framework of public international law. This is not incompatible with the views stated in UNCTAD’s 2004 Trade & Development Report.¹²²

118. See generally William P. Alford, *To Steal a Book Is an Elegant Offense: Intellectual Property Law in Chinese Civilization* (1995); Okediji, *supra* note 29.

119. Examples of these norms include copyright (and the bundle of rights it contains, together with exceptions and a long term of protection) for literary and artistic works and a twenty-year patent for new, useful, and nonobvious inventions, reflected in the footnote to Article 27 in TRIPS, *supra* note 9. One could, in theory, devise a different system from scratch, but the internationalization of any such new system would have very significant transition costs. There is no guarantee that one could do better on the basis of available “performance indicators” for the various types of IP protection. The temptation to build sui generis systems thus far has not been met with complete success, as the database and computer chip examples demonstrate. That being said, the existing traditional structures of protection are far from perfect and can be improved upon, but most likely only in an incremental fashion. See Gervais, *supra* note 55.

120. See Appellate Body Report, *United States—Standards for Reformulated and Conventional Gasoline*, pt. III.B, WT/DS2/AB/R (Apr. 29, 1996), available at <http://docsonline.wto.org>.

121. The recent example of the Brasilia summit between Arab and Latin American Nations comes to mind. Additionally, see U.N. Educ., Scientific and Cultural Org., *Preliminary Draft of a Convention on the Protection of the Diversity of Cultural Contents and Artistic Expressions*, CLT/CPD/2004/CONF-201/2 (July 2004), available at <http://portal.unesco.org/culture/en>; The Convention on Biological Diversity, *supra* note 49; Ruth L. Okediji, *The Institutions of Intellectual Property: New Trends in an Old Debate*, 98 *Am. Soc’y Int’l L. Proc.* 219 (2004).

122. Trade and Development Report, *supra* note 116, at 79. The Report stated,

A more balanced perspective, also taking its cue from Adam Smith, links a process of successful integration back to productivity gains from specialization, gains that are amplified through innovation, the use of better equipment, scale economies at the firm level and by “externalities” such as learning and improvements in human capital.

Id. And further,

the openness agenda has perpetuated a lopsided view of the forces driving economic integration. It stresses the potential gains from participation in

The assumption is true that importing IP rules wholesale into the legislative and industrial fabric of a developing economy is unlikely to succeed.¹²³ However, it is fair to assume that a country's technology imports and inward FDI are unlikely to grow without IP rules. In other words, IP rules are required.

It would be counterproductive to develop independent rules for at least two reasons. First, there is little if any evidence that a new form of IP or even variations on known themes would work better. Second, there would be huge transition costs and friction in convincing foreign partners of the validity of such new or customized rules. For multinational corporate investors, there is value in predictability and dealing with a known set of regulatory parameters.

The TRIPS policy partly has the flexibility needed by developing economies. By developing a comprehensive strategy, a country can limit the negative impact of transitioning to higher IP protection and increase its chances of reaping the benefits thereof, including technology-related FDI and growing domestic internet, pharmaceutical, or other technology-based industries.

B. *Building a National Knowledge Strategy*

Granted, the task at hand is not a simple one. Yet, instead of trying to turn back the clock of extant liberalization and IP rules, this Article suggests that they can be put to good use. This Article does not seek to cover all aspects of a comprehensive knowledge-optimization strategy, the primary purpose of which would be to strengthen a country's economy and its growth. However, the following paths could be followed.

international markets while downplaying adjustment costs, and it stresses convergence tendencies while ignoring potential sources of cumulative divergence. . . . Trade is just one among several interrelated factors shaping integration. Its impact is largely contingent on the presence of dynamic forces—specialization, learning and innovation, scale economies and capital formation—that do not respond in a simple or predictable way to the incentives generated from rapid opening up. Strengthening these forces requires a series of complementary institutional reforms and discretionary macroeconomic, industrial and social policy measures. This implies considerable diversity in the pattern of integration, even among countries at similar levels of economic development.

Id. at 95.

123. See, e.g., Comm'n on Intellectual Prop. Rights, Executive Summary: Integrating Intellectual Property Rights and Development Policy (2002), available at http://www.iprcommission.org/papers/pdfs/final_report/CIPR_Exec_Sumfinal.pdf. The Summary states that

it may be unwise to focus on TRIPS as a principal means of facilitating technology transfer. A wider agenda needs to be pursued, as is currently being done in the WTO. Developed countries need to give serious consideration to their policies for encouraging technology transfer. In addition, they should promote more effective research and cooperation with and among developing countries to strengthen their scientific and technological capabilities.

Id. at 5.

Developing countries wishing to attract FDI and distributorships of foreign goods, that also want to retain their best students (especially those who have studied abroad in scientific or engineering-related fields) need an IP policy; but, for success, that policy must form part of a broader knowledge optimization strategy. How best to utilize foreign knowledge and develop domestic innovation and creativity will depend in part on how foreign investors and firms view the country's "comfort level." That comfort level is measured in terms of IP protection and enforcement, but it also depends on myriad other factors, including other regulatory aspects, such as competition, investment, freedom to market, employment, and cultural and political parameters. Indeed, the realization that IP rules per se do not automatically lead to an increase in inward FDI, and that much more than IP rules are required to develop domestic innovation and creativity, is perhaps what has prompted many developing countries to insist in WTO meetings on the technology transfer part of the TRIPS bargain, which is enshrined in TRIPS Article 66(2), as well as capacity building under Article 67.¹²⁴

The IP component of the "comfort level" perceived by U.S.-based multinational firms as measured by Mansfield is significant, but its importance should not be overstated. As Professor Paul J. Heald aptly noted,

All in all, a close look at Mansfield's research provides support for the proposition that American firms with significant disclosure worries are influenced by the level of enforcement of trade secrecy and contract law in making foreign direct investment decisions. Its current status as canonical evidence that maximum enforcement of all sorts of intellectual property law—and especially patent law—will stimulate investment should not remain unchallenged. Instead of blindly relying on Mansfield's research, a more rational strategy for developing countries would take into account the costs and benefits of protection in the context of their unique economic situation. Depending on the category of intellectual property subject to the TRIPS Agreement, developing countries should seriously consider minimal compliance.¹²⁵

Implementing TRIPS entails significant costs.¹²⁶ Not only must legal regimes be brought into conformance, but officials working in various government departments, including judges, police, and customs authorities,

124. See TRIPS, *supra* note 9, arts. 66(2), 67.

125. Heald, *supra* note 61, at 318.

126. See Mariko Kunimi, *TRIPS Agreement, Is It Really Successful Achievement in the WTO? The Difficulty of Balancing Between Public and Private Interests*, 3 *Or. Rev. Int'l L.* 46, 46 (2001). Professor Ragavan bluntly refers to this as the "poverty penalty," stating,

The term "poverty penalty" refers to the cost poorer nations suffer from fulfilling international obligations that require prioritizing trade interests to the detriment of welfare. Developing nations uniquely suffered the poverty penalty because, when economic conditions and public health threatened to deteriorate, developed nations practiced both price control and compulsory licensing.

Ragavan, *supra* note 46, at 779.

must be trained to understand the new rules. Enforcement itself may impose a serious burden on the judicial and administrative system. Many commentators, even those in favor of high IP protection levels, recognize that developing countries are often hit hard when first introducing TRIPS (or a fortiori TRIPS Plus) norms, and significant costs may be incurred relating to prosecution, examination, infringement, litigation, enforcement, training, etc.¹²⁷ These commentators note, however, that some of these costs may be recouped by charging user fees.¹²⁸ It is argued that a high level of IP protection is beneficial in the long run because piracy is detrimental to long-term domestic competitive strategies.¹²⁹ Copyright laws are beneficial for local authors as piracy will increase their competition by introducing foreign works at lower costs. This will inhibit the local community from developing its work in this area in both the long and short run.

It is also argued that patent protection is not detrimental to a country per se. First, patents are just a series of instructions. On their own, they will likely be useless to someone in a developing country attempting to reverse engineer the technology. Second, patented technology from other countries likely will not be the technology needed by a developing country. Technology applicable to a developing country will only be developed if there are patents in place to protect the inventor. Finally, developing countries granting patents will pay less than wealthy countries for the use of patent rights.¹³⁰

Properly adjusting the level of compliance with international norms, from minimal TRIPS implementation with systematic use of all available “wiggle room”¹³¹ to full TRIPS Plus¹³² compliance and enforcement, requires an understanding of the fine points of a highly complex set of norms, developed over decades of expert-level discussions, being “parachuted” into

127. See Keith E. Maskus & Jerome H. Reichman, *The Globalization of Private Knowledge Goods and the Privatization of Global Public Goods*, 7 J. Int'l Econ. L. 279, 315 & n.155 (2004); Jerome H. Reichman, *From Free Riders to Fair Followers: Global Competition Under the TRIPS Agreement*, 29 N.Y.U. J. Int'l L. & Pol. 11, 29 (1997) [hereinafter *Free Riders*].

128. See Jean Raymond Homere, *supra* note 55. High user fees may make it more difficult for lower income nationals in the country concerned to access services and may thus indirectly benefit foreign rightsholders.

129. See Braga & Fink, *supra* note 64; Kitch, *supra* note 95, at 169-78.

130. See Kitch, *supra* note 95, at 169-78. See generally Braga & Fink, *supra* note 64.

131. See *Free Riders*, *supra* note 127, at 28.

132. On the return to bilateralism generally and TRIPS Plus negotiations by the U.S. Trade Representative, see David Vivas-Eugui, *Regional and Bilateral Agreements and a TRIPS-Plus World: The Free Trade Area of the Americas (FTAA) (2003)*, available at [http://www.geneva.quno.info/pdf/FTAA%20\(A4\).pdf](http://www.geneva.quno.info/pdf/FTAA%20(A4).pdf); Peter Drahos, *BITs and BIPs: Bilateralism in Intellectual Property*, 4 J. World Intell. Prop. 791 (2001); Ruth L. Okediji, *Back to Bilateralism? Pendulum Swings in International Intellectual Property Protection*, 1 U. Ottawa L. & Tech. J. 125 (2004); Peter K. Yu, *Currents and Crosscurrents in the International Intellectual Property Regime*, 38 Loy. L.A. L. Rev. 323 (2004) (discussing the increasing focus of the United States trade officials on bilateral, multilateral, and regional free trade agreements).

a legal system that may not have such checks and balances as competition law or freedom of speech or, indeed, even the necessary level of expertise to parse the new and highly complex rules¹³³ without a comprehensive training program.

1. Cooperation and Coalition Building.

Developing countries can, of course, coordinate. They can exchange with each other “recipes” for success and establish coalitions and parameters for international (bilateral, regional, or multilateral) negotiations involving IP rules.¹³⁴ They can create regional industrial property offices,¹³⁵ regional copyright collectives, or technical agencies offering services to several national collectives. They also can use fora other than the WTO in cooperation with “civil society” groups to attempt to develop alternative norm-setting exercises.¹³⁶ The value of these exercises as potentially relevant norms of public international law has not been fully tested before WTO dispute-settlement panels.¹³⁷

2. Priority Setting

Based on existing industrial infrastructures, successes, education programs, available natural and human resources, and potential domestic and regional markets, what are the realistic areas that a country should prioritize? The primary target of a strategy should not be to obtain new imports, though they may be useful, but rather to build domestic IP-generating activities. This can be done in part through FDI (which almost always includes a knowledge and technology transfer component), but also by developing domestic innovation, creativity, and industry at optimal levels.¹³⁸

3. Education and Institutional Capacity Building

Once priorities have been set, education and institutional capacity building are probably the most important aspects. Education, both in the country and abroad, is the cornerstone of a viable, long-term knowledge

133. See Rochelle Cooper Dreyfuss, *TRIPS–Round II: Should Users Strike Back?*, 71 U. Chi. L. Rev. 21 (2004).

134. This coordination may be seen as a logical response to the coalition of industrialized countries that successfully pushed for the adoption of TRIPS. See *supra* note 4 and accompanying text; see also Ruth Okediji, *Public Welfare and the Role of the WTO: Reconsidering the TRIPS Agreement*, 17 Emory Int'l L. Rev. 819, 839-42 (2003).

135. See *infra* note 141 and accompanying text.

136. See Graeme B. Dinwoodie & Rochelle C. Dreyfuss, *TRIPS and the Dynamics of Intellectual Property Lawmaking*, 36 Case W. Res. J. Int'l L. 95, 121 (2004) (“[D]eveloping countries have recently seen regime-shifting as a bulwark against the established power balance in international lawmaking, and over time user groups might likewise view the ability to shift forum as a valuable defensive technique.”).

137. See Gervais, *supra* note 12, at 343-44.

138. See Scotchmer, *supra* note 31, at 429-36.

strategy and economic growth in the information society. For example, a country should pay to send some of its best students to the top foreign universities, especially in fields where the knowledge brought back can directly advance the selected priorities. This could include engineering, biology, chemistry, physics, and other sciences as well as management and law, including IP law. In certain cases, financial mechanisms may be used to ensure that trained graduates will return to their countries of origin.

If a country does not have patent protection, it will have difficulty attracting technology-oriented employers and retaining nationals that have studied in these areas.¹³⁹

A country should hold seminars and invite foreign professors and practitioners of international standing in priority areas. Once knowledge is available on a recurring basis domestically, more students will be able to access it at a lower cost. Training for policy makers, judges, high officials, and other persons involved in economic development projects should likewise be organized.¹⁴⁰

Developing educational institutions and services is costly. Developing IP institutions such as patent and trademark offices is perhaps even more so. Yet, developing countries can either delegate these roles to foreign institutions, a majority of which are located in the "First World," thereby losing some of their ability to customize the services, or take the policy bull by the horns and pay the price. Ideally, more industrialized nations should fund training and establishment of local patent and trademark offices because of their educational role with local businesses and research facilities. Absent this kind of funding, another option, used in some parts of Africa,¹⁴¹ is to build regional offices.

4. Subsidies and Awards

Within WTO and other applicable rules, there is still room for several subsidies in the form of tax breaks or other incentives. These may also be used to attract FDI. By granting merit-based research subsidies or grants to local creators, an incentive to local innovators and creators is created. For example, by rewarding significant achievements at an annual award ceremony, successful innovators and creators are compensated and a strong social signal is sent about the value of creation and innovation. This then functions as an additional incentive for others.

139. See Kitch, *supra* note 95, at 170-71; Singham, *supra* note 96 (arguing that patent protection encourages invention both domestically and abroad; that weak patent systems, on the other hand, discourage investment and cause a brain drain in countries of some of their most talented and educated individuals; and suggesting that developing countries with stronger protections will attract more venture capital for small start-up companies).

140. It cannot be stressed enough that successful education programs will depend on selecting the best-qualified candidates for each program, not selecting candidates solely or mainly on other factors which are not statistically predictive of academic success.

141. See, e.g., The African Regional Industrial Property Organization, <http://www.aripo.wipo.net/index.html> (last visited Sept. 8, 2005).

5. FDI Marketing

FDI is not a panacea, but in the game of economic growth and development, it is a better solution than simply increasing imports. FDI generally comes with formal or informal knowledge and technology transfer and creates more and better local jobs than simple distributorships. Each country should thus market its advantages bilaterally, at international fairs, through graduate students, etc. It could survey multinational companies operating in its priority areas to determine their perception of the country's strengths and weaknesses, address shortcomings identified in the survey, and provide information on positive aspects that are simply not known in interested circles.

6. Non-IP Regulatory Adaptation

Based on WTO and other rules and surveys, regulatory shortcomings should be addressed. Usually, an efficient legal system, investment protections rules, a competitive tax system, and access to a qualified workforce will rate fairly high in the list of FDI preconditions. In parallel, as the U.K. Commission on IPRs noted,¹⁴² Articles 8 and 40 of TRIPS allows a WTO member to determine an appropriate interface between IP and competition law. However, many countries that implemented TRIPS recently did not, and still do not, have competition legislation.¹⁴³

7. Patent Mining

While patent mining is also not a panacea, patent databases have the advantage of being publicly available. By mining recent patents and providing copies to local companies with product development abilities, a number of upward technological steps may be taken fairly rapidly. Of course, the obligation to comply with TRIPS means that if the patent is granted in a developing country, the technology cannot be used directly. But even if a reasonable license cannot be obtained, the knowledge could be used for noncommercial research, for example.

These are of course only examples of the components of a full strategy.

CONCLUSION

Without adequate IP protection, economic development will not occur at an optimal level, though it is unclear whether IP rules have any positive effect on the development of the truly poorer nations. In addition, we now know that while IP is an essential ingredient, it does not, by itself, make an economic plan. Many more elements are required. This Article has argued that, for both practical reasons and on the basis of available empirical data,

142. *See supra* note 1.

143. *See Dreyfuss, supra* note 133, at 31-32.

TRIPS should be seen, and accepted, as a given. Further, it may be defended as an appropriate reference point for developing nations in the context of TRIPS Plus bilateral trade discussions. Indeed, post-TRIPS developments have been going in two (arguably diverging) directions. On the one hand, TRIPS-related development within WTO, as well as recent developments in the WIPO, have tried to be more responsive to the perceived needs of developing countries and the interests of users in securing access to protected content and material on terms they consider reasonable. This even includes broad exceptions to obligations to obtain permissions and licenses. On the other hand, IP developments in bilateral and regional trade agreements mirror the so-called “maximalist” approach.¹⁴⁴ This latter trend to regulate IP rights through bilateral regimes may not immediately threaten the balanced approach of WTO and WIPO, but these bilateral initiatives likely will have a significant impact in the long run.¹⁴⁵

TRIPS contains a number of rules that WTO members must implement, but it also affords a fair margin of “policy flexibility.” Thus, implementing TRIPS may and should be viewed as part of a broader knowledge strategy resting on priority setting, education and institutional capacity-building, regulatory adaptation, FDI “marketing,” and patent mining. Finally, if TRIPS were defended as the “correct” international norm, it would have the effect of buttressing the position that TRIPS Plus is inadequate at this juncture for many, and perhaps most, developing countries.

144. For example, recent U.S. Trade Agreements export the Digital Millennium Copyright Act (“DMCA”), Pub. L. No. 105-304, 112 Stat. 2860 (1998) (codified as amended in scattered sections of 17 U.S.C. (2000)). DMCA-like provisions are—or will soon be part of—national legislations in Central America and Asia as something of a stand-alone legislative instrument. Similar provisions are also being negotiated in a number of other agreements as well as within the Free Trade Area of the Americas. *See Sell, supra* note 10, at 121-62.

145. *See Gervais, supra* note 12, at 68-70.

Notes & Observations