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INTELLECTUAL PROPERTY AND DEVELOPMENT: TOWARDS A STRATEGY

by

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Intellectual Property & Development: Towards a Strategy

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NOTE: This is a rough draft. Footnote format is not consistent, though most are to Canadian style sheet standards (not Bluebook). The last part is only a sketch at this stage.

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Introduction

Any national or regional economy is necessarily a complex “system”². This means that changes to one aspect or policy “lever” will inevitably affect other areas. Therefore, an

¹ Financial assistance from the Social Sciences and Humanities Research Council of Canada (SSHRC) and research assistance from Ms. Shalisa Khan (LL.B., Univ. of Ottawa) and Marina Pavlovic (LL.D. candidate, Univ. of Ottawa) are most gratefully acknowledged.

² The definition proposed by the International Technology Education Association illustrates the point. It defines “system” as “[a] group of interacting, interrelated, or interdependent elements or parts that function together as a whole to accomplish a goal” (as found via Google.com, March 19, 2005). On a more scholarly level, complex systems may be defined as “systems with multiple elements [...] constantly evolve and unfold over time.” W. Brian Arthur, “Complexity and the Economy”. Science, Vol. 284, (April 1999) at 107.

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intellectual property regime must be viewed as forming part of a broader set of measures designed to optimize knowledge development and utilization. That optimization in turn should enhance economic growth, cultural prosperity and human development.

The policy dilemma may be summarized as follows: while importing “foreign” intellectual property rules wholesale into the legislative and industrial fabric of a developing economy is insufficient to succeed, it is fair to assume that a country’s technology imports and foreign investment are unlikely to grow without adequate intellectual property rules. In other words, intellectual property rules are required. At the international level, those rules are now essentially enshrined in the TRIPS Agreement³.

This paper suggests that TRIPS norms should be integrated in a broader strategy designed to optimize innovation and access to knowledge. Viewed pragmatically, a part of any short or medium-term strategy should include working with TRIPS as a given, and perhaps even as a common reference point or defence against TRIPS-plus demands in bilateral discussions. TRIPS is not perfect of course but there is some degree of built-in policy flexibility that developing economies can use. More importantly, however, by developing a comprehensive strategy, a country can limit the negative impact of transitioning to higher intellectual property protection and increase its chances of reaping the benefits thereof, including technology-related foreign direct investment (FDI) and growing domestic Internet, pharmaceutical or other technology based industries.

It is not a contradiction to consider, in the longer term, that TRIPS is not static. TRIPS evolves with each panel and Appellate Body interpretation. That Body has indicated, for instance, that TRIPS should not be read in “clinical isolation” from public international law.⁴ Norms negotiated elsewhere can be used to try to interpret TRIPS as forming part of a broader normative regime⁵. Developing and other countries can coalesce to develop alternative sets of norms and the inclusion of TRIPS and WTO rules in the broader framework of public

³ World Trade Organization Agreement on Trade-Related Intellectual Property Rights, Apr. 15, 1994, Marrakech Agreement Establishing the World Trade Organization, Annex 1C, Legal Instruments--Results of the Uruguay Round Vol. 31; 33 I.L.M. 1197 [hereinafter referred to as “TRIPS Agreement” or “TRIPS”].

⁴ See “US – Standards for Reformulated and Conventional Gasoline”, Report of the Appellate Body, WTO Doc. WT/DS2/AB/R, at para.III. B. See also Ruth Okediji, “The Institutions of Intellectual Property: New Trends in an Old Debate” (2004), 98 Am. Soc’y Int’l L. Proc. 219.

⁵ See Graeme B. Dinwoodie and Rochelle C. Dreyfuss, “TRIPS and the Dynamics of Intellectual Property Lawmaking” (2004), 36:1 Case W. Res. J. of Int’l L. 95, 120-1; and Ruth Okediji, “TRIPS Dispute Settlement and the Sources of International Copyright Law” (2001), 49 *J. Copyright Soc’y U.S.A.* 585.

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international law.

Against this backdrop, this Chapter examines, in Part I., the emergence of the World Trade Organization (WTO) Agreement on Trade-related Aspects of Intellectual Property Rights (TRIPS)⁶. 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 intellectual property protection, and reduce differences among relevant national rules. TRIPS also added a significant level of comfort for multinational corporations deciding when and where to export to new markets or expand research and development efforts⁷ (other factors those corporations tend to consider include the tax structure and available subsidies, the availability of qualified workers and the labour relations environment, the protection of investments, the quality of the legal and judicial system and law enforcement, to name some of the most important ones). The Chapter then turns to the changing face of international intellectual property agenda, evidenced *inter alia* by the Doha Ministerial Declaration of November 2001 and follow-up work on access to medicines and the recent adoption of a “development agenda” by the World Intellectual Property Organization (WIPO).

In Part II, the Chapter discusses recent economic analyses of the impact of intellectual property protection on bilateral trade flows and FDI. Appropriate distinctions are made between trade and FDI. Wherever possible, lessons about the “right” level of intellectual protection are drawn. Recent efforts in the World Intellectual Property Organization (WIPO) and World Trade Organization (WTO) are also discussed.

In the third and final Part, the paper looks at the current quest for a “balanced” approach and suggests ways in which such a balanced intellectual property regime could be put in place, as part of a broad knowledge-oriented economic strategy.

⁶ Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, Legal Instruments--Results of the Uruguay Round Vol. 31; 33 I.L.M. 1197.

⁷ 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 US-based multinationals that first suggested linking trade and intellectual property in the 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, [2005] I.P.Q. 155; and Susan K. Sell. Private Power, Public Law: The Globalization of Intellectual Property Rights. Cambridge Univ. Press, 2003, at 96-120

Part I - TRIPS Lessons

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 only Annex 1C of the Agreement Establishing the World Trade Organization.⁸ As such, it was part of a package. Its negotiators came from a group of initially 20 countries, subsequently increased to approximately 30. Half of the negotiators came from industrialized nations, while others hailed from developing countries. The representatives of developing nations were often trade negotiators with little or no prior exposure to intellectual property. Few had advanced legal training. This dissymmetry put them at a disadvantage when discussing detailed arcane drafting points, especially those linked to the specific history of existing treaties such as the Berne and Paris Conventions⁹. In addition, the disparity in bargaining knowledge may have been enhanced by the negotiating process itself.

Indeed, in the first few months of 1990, a number of industrialized countries tabled, with little advance notice¹⁰, draft legal texts of what they saw as the future TRIPS Agreement. Prior to the 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 Communities, the United States, Japan, Switzerland and Australia,¹¹ foreshadowed a detailed agreement covering all intellectual property 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

⁸ April 15, 1994, Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations; Legal Instruments-Results of the Uruguay Round 6, 6-18, 33 I.L.M. 1140, 1144-53 (1994).

For a detailed negotiating history, see Daniel Gervais, *The TRIPS Agreement: Drafting History and Analysis*, 2nd ed. (London: Sweet & Maxwell, 2003).

⁹ Berne Convention for the Protection of Literary and Artistic Works, Paris Act of July 24, 1971, as amended on Sept. 28, 1979, 828 U.N.T.S. 222 [hereinafter Berne Convention]; Paris Convention for the Protection of Industrial Property, Mar. 20, 1883, as last revised July 14, 1967, 21 U.S.T. 1583, 828 U.N.T.S. 305 [hereinafter Paris Convention].

¹⁰ Formally, that is. A draft TRIPS text (though not as detailed) prepared by the private sector and a Washington, D.C., lawyer, had been in circulation since the mid-1980s. See *supra* note 5.

¹¹ See Gervais, *supra* note 8, at paras. 1.18-9. The US and EC text were suggested by private interest groups, funded mostly from the pharmaceutical and entertainment industries. See Sell, *supra* note 7 **Erreur ! Signet non défini.** and Jagdish Bhagwati. *In Defense of Globalization* (Oxford Univ. Press, 2004), at 182-185..

customs authorities and a provision bringing future TRIPS disputes under the GATT/WTO dispute-settlement umbrella.¹² These proposals were far from obvious in light of the limited mandate of the TRIPS negotiating group.¹³

As a reaction, a group of 12 developing countries, which later grew to 14,¹⁴ 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 in July 1990 that melded all industrialized countries’ proposals into one, with square brackets used to signal differences in the various legal texts and which became the “A” proposal, while the developing countries’ text became the “B” text¹⁵. The final Agreement mostly mirrored the A text. As such, it essentially embodied norms that had been accepted¹⁶ by industrialized countries. The concerns of developing countries were reflected mainly 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 was a “consensus” that they should be updated.¹⁷ This is true of the Paris, Berne and Washington treaties, which deal with copyright, industrial property (patents, designs and trademarks) and integrated circuits, respectively.¹⁸ By and large, the so-called “North” imposed its then most-advanced set of norms on the “South”. In fact, there were relatively few concessions made by major

¹² The lack of a dispute resolution mechanism on the international level (state-state) was the main problem in enforcing the obligations under the Berne Convention and the Paris Convention. The WTO dispute-settlement mechanism applies only to the disputes between States.

¹³ See the Punta del Este Declaration (launching the Uruguay Round). Document MIN.DEC of September 20, 1986, pp. 7-8.: “In order to reduce the distortions and impediments to international trade, and taking into account the need to promote effective and adequate protection of intellectual property rights, and to ensure that measures and procedures to enforce intellectual property rights do not themselves become barriers to legitimate trade, the negotiations shall aim to clarify GATT provisions and elaborate as appropriate new rules and disciplines. Negotiations shall aim to develop a multilateral framework of principles, rules and disciplines dealing with international trade in counterfeit goods, taking into account work already undertaken in GATT. These negotiations shall be without prejudice to other complementary initiatives that may be taken in the World Intellectual Property Organization and elsewhere to deal with these matters.”

¹⁴ Argentina, Brazil, Chile, China, Columbia, Cuba, Egypt, India, Nigeria, Pery, Tanzani and Uruguay. Pakistan and Zimbabwe joined later on.

¹⁵ 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?

¹⁶ In some cases just a few years before, such as the Berne Convention only ratified by the United States in 1989.

¹⁷ Gervais, *supra* note 8, at p. 68.

¹⁸ The Berne Convention, the Paris Convention and the Washington Treaty on Intellectual Property in Respect of Integrated Circuits (this last treaty which never entered into force but was nonetheless used as a foundation for TRIPS).

industrialised countries, despite their disagreements on some issues,¹⁹ except the need to submit themselves to binding dispute-settlement. By contrast, developing countries were forced to accept a package that, in certain cases, perhaps they did not fully understand and which contained a complete set of intellectual property norms they now had to implement into their national law. The only true measures they obtained (in addition to Articles 7 and 8²⁰) were transitional periods to implement the Agreement. For developing countries other than least-developed ones, such transitional periods expired in January 2000.²¹

Developing countries accepted the Agreement in many if not most cases because of significant political concessions²² in other sectors of the Round, such as tariffs on tropical fruit or textiles²³. At the time, there were very few people arguing that TRIPS *qua* TRIPS was good in the short term for all developing countries. Developing countries accepted it as part of a package. There was, however, a two-prong belief in demander countries and certain lobbies that (a) TRIPS was necessary to maximize the rent that could be extracted from emerging foreign markets (and related beliefs that unpaid and unlicensed use of “Western” intellectual property was comparable to theft or “piracy” and that increased foreign revenues would lead

¹⁹ The United States could not accept the Rome Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations, which protects neighbouring (or “related”) rights. Therefore, the wording of TRIPS only refers to Rome in respect of exceptions (Article 14). See Gervais, *supra* note 8, at p.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 industrialised countries involved in discussions of these issues, they were solved either by introducing exceptions (as in Article 9 on moral rights or 27 for biotechnology) or by rather vague undertakings to negotiate further, as in Article 24 (concerning geographical indications).

²⁰ TRIPS Article 7: The protection and enforcement of intellectual property rights should contribute to the promotion of technological innovation and to the transfer and dissemination of technology, to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare, and to a balance of rights and obligations.

Article 8: 1. Members may, in formulating or amending their laws and regulations, adopt measures necessary to protect public health and nutrition, and to promote the public interest in sectors of vital importance to their socio-economic and technological development, provided that such measures are consistent with the provisions of this Agreement. 2. Appropriate measures, provided that they are consistent with the provisions of this Agreement, may be needed to prevent the abuse of intellectual property rights by right holders or the resort to practices which unreasonably restrain trade or adversely affect the international transfer of technology.

²¹ The transitional period for pharmaceutical patents has been extended until 2016 for least developed countries in the Doha Declaration. See *infra* note 126.

²² For an interesting empirical analysis of how and why developing countries adopt higher intellectual property norms (in many cases not because they believe they need or will benefit from them), see R.L. Ostergard Jr., *The Development Dilemma: The Political Economy of Intellectual Property Rights in the International System*. LFB Scholarly Publishing, 2002.

²³ A key difference between the WTO and organizations such as WIPO is that concessions are made in WTO negotiations across negotiating sectors. IP policy issues may be “abandoned” for lower tariffs of cotton or coffee, for example. Interestingly, these issues are sometimes linked. The protection of intellectual property rights in agricultural products, such as seeds is becoming an increasingly important issue.) See Uma Lele et al. *Intellectual Property Rights in Agriculture: The World Bank’s Possible Future Role in Assisting Borrower and Member Countries*. (World Bank, Environmentally and Socially Sustainable Development Series: Rural Development, 1999)

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to higher overall levels of research and development) and (b) that TRIPS was a difficult but essential measure to jumpstart global economic development²⁴. Intellectual property as policy castor oil, as it were: countries should overlook the distasteful aspects of introducing or increasing intellectual property protection and enforcement in exchange for longer term economic health²⁵.

As a result of this process, TRIPS adjusted the level of intellectual property protection to what was the highest common denominator among major industrialized countries as of 1991. It was implemented in almost all WTO member countries, often by incorporating with little change model laws provided by WIPO.

B. Post-TRIPS Developments in the WTO

²⁴ This debate was present in China when it was first considering the adoption of a “Western-style” patent law. As Prof. Alford explains:

“Proponents of a patent law placed primarily emphasis on its likely salutary economic effects, arguing that China needed to smash the [...] mentality of the Cultural Revolution that rewarded all equally, irrespective of the quality of their work [...]. This could only be accomplished, they contended, by adopting a patent system that provided meaningful material incentives. By permitting those who had so contributed to reap the fruits of their labours, a patent law would also, it was suggested, allow China’s most innovative organizations to accumulate additional capital and strengthen their management, which would spur further inventive activity [...]

Opponents of a patent system [...] expressed concern about Western ‘literary-industrial complex,’ which some believed might patent so broadly in China as to stifle the development of indigenous science and so leave the nation dependent on the outside world economically, scientifically, and militarily. It would be foolhardy, they argued, to risk draining China’s limited foreign exchange reserves to pay royalties—especially when the same technology could be acquired at no cost, albeit without authorization.”

William P. Alford, *To Steal a Book Is an Elegant Offense: Intellectual Property Law in Chinese Civilization*. (Stanford Univ. Press, 1995), at 67-8.

²⁵ A point articulated in a recent article in the *International Herald Tribune*:

By protecting market exclusivity, the industry says, the trade agreement [in this CAFTA, the Central American Free Trade Agreement] would spur innovation and encourage pharmaceutical companies to register drugs in the smaller countries, ultimately helping to deliver 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 foster a system that produces the type 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”, *International Herald Tribune*, July 2-3, 2005, at 10.

One can readily 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 and how the pact will help “deliver drugs to the needy”. The article makes it plain, however, that Central American countries did not agree to the pact because they thought the intellectual property was beneficial per se, but rather because of concessions made by the United States in the textile and agricultural sectors. What several NGOs and so-called “civil society” groups point out is that while such trade deals may globally help the respective balance sheets of the signatory countries, the new riches may not alleviate poverty or contribute to overall economic development at least not in the short term. This is one of the areas in need of substantially more empirical research, as is explained below.

We are now in the midst of the Doha Development Round, which started in Qatar in November 2001.²⁶ The language of the Declaration adopted in Doha is a measure of the changes since 1994. In the three paragraphs concerning TRIPS, there are few openings for demands to increase intellectual property protection.

The 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.”²⁷ In the following paragraph (18), the Declaration addresses a mostly North-North issue, the completion of the negotiations on geographical indications on wines & spirits.²⁸ The third and perhaps most famous paragraph (19) 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” 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 Agreement”²⁹ and shall take fully into account the development dimension.”³⁰ In other words, apart from the possible increase in protection of names of wines & spirits, the Doha Declaration essentially reflects concerns expressed by certain developing countries. Paragraph 17 also insists on the balance between the need for access to intellectual property and its protection, which some might be tempted to see as a philosophical underpinning for ongoing discussions.

C. TRIPS and Public Health

The separate *Declaration on the TRIPS Agreement and Public Health*³¹ 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 measure to protect public health. Such an interpretation means that the TRIPS Agreement should be interpreted in the 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 grounds upon which such licenses are granted”; each member has the right to determine what constitutes a national emergency

²⁶ Ministerial declaration WT/MIN(01)/DEC/1 20 November 2001.

²⁷ Ibid paragraph 17.

²⁸ Ibid. paragraph 18.

²⁹ See supra note 20.

³⁰ Ministerial declaration WT/MIN(01)/DEC/1 20 November 2001 at paragraph 19.

³¹ Document WT/MIN(01)/DEC/2.

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or the other circumstances of extreme urgency (where public health crises may represent national emergency); “the effect of the provision 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 MFN and national treatment provisions”.³²

After intensive and difficult negotiations, the WTO General Council adopted the *Decision on Implementation the Doha Declaration on the TRIPS Agreement and Public Health* in 2003.³³ This Decision 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 Decision is imperfect,³⁴ but the point here is not to criticize the result but to draw attention to the process which was in place to take account of the needs of developing countries. That being said, the importance of patents in preventing or reducing access to life-saving pharmaceuticals is the subject of debate among experts. While a compulsory license may reduce the patent (royalty) cost, it does not eliminate the production costs, nor the problems associated with distribution and timely administration of the medicines³⁵. However, if patents are indeed more a part of the problem than of the solution for certain developing countries living with HIV/AIDS or other epidemics, then the Decision may help them overcome that obstacle³⁶.

It has also been argued that recourse to compulsory licensing may be ill-advised when considered in a longer term perspective. The purpose of TRIPS, it is said, is to enhance *global*

³² Ibid.

³³ Decision of the General Council of 30 August 2003, Document number WT/I/540. See also C.M. Correa, “Supplying pharmaceuticals to countries without manufacturing capacity: Examining the solution agreed upon by the WTO on 30th August, 2003” (2004), 1 *Journal of Generic Medicines* 105-119.

³⁴ See, e.g., Bryan C. Mercurio, “TRIPS, Patents, and Access to Life-Saving Drugs in the Developing World” (2004), 8 *Marq. Intell. Prop. L. Rev.* 211, 237 (“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 also 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?” (2004), 7 *J. Int'l Econ. L.* 73; Paul J. Heald, “Mowing the Playing Field: Addressing Information Distortion and Asymmetry in the TRIPS Game,” (2003) 88 *Minn. L. Rev.* 249; Thomas F. Cotter, “Market Fundamentalism and the TRIPS Agreement” (2004), 22 *Cardozo Arts & Ent. L.J.* 307. For a view saying that the Declaration goes too far in favor of developing countries and act as a disincentive to research, see Alan O. Sykes, “TRIPS, Pharmaceuticals, Developing Countries, and the Doha ‘Solution’” (2002), 3 *Chi. J. Int'l L.* 47.

³⁵ See, e.g. Attaran, Amir and L. Gillespie-White. “Do Patents for Antiretroviral Drugs Constrain Access to AIDS Treatment in Africa?”, (2001) *J. of the Amer. Med. Assoc.* 286, 15: 1886-1906.

³⁶ See K.M. Gopakumar, “The WTO Deal on Cheap Drugs—A Critique”, (2004), 7 *J. World Intell. Prop.* 99 (2004);

welfare, not welfare measured country by country or region by region. If multinational pharmaceutical firms can reap additional profits from developing nations, then new products will result due to higher investment in research & development. While this may benefit mostly consumers in richer countries, it still increases welfare measured globally³⁷. Professor Sykes for instance suggests that introducing high levels of intellectual property protection in developing countries induces firms to invent things of particular interest to developing countries (*e.g.*, anti-malaria drugs) and to engage in technology transfer. In addition, without uniform rules, there may be a “collective action” problem. The problem arises because an individual developing country may be better off 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 things of particular interest to developing countries, without having to pay the costs. TRIPS solves the collective action problem by requiring all of the member nations to have strong intellectual property protection.³⁸

In responding to Professor Sykes arguments, Professor Cotter suggests that “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 Act* to make research into some drugs with relatively small demand profitable”³⁹ (under the *Orphan Drug Act*⁴⁰, 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).

If one takes the view that welfare-enhancing measures must produce positive effects in each country (which may make it easier to “sell” intellectual property rules to domestic constituencies), then even a “global” welfare increase may be insufficient to allay the concerns of developing nations.

³⁷ See, *e.g.*, Alan O. Sykes, “TRIPS, Pharmaceuticals, Developing Countries, and the Doha ‘Solution’*loc.cit.*, at 62-66).

³⁸ *Ibid.*

³⁹ Thomas F. Cotter, “Market Fundamentalism and the Trips Agreement” *supra* note 34, at 335-6.

⁴⁰ 21 U.S.C. § 360aa (2004).

D. TRIPS and Traditional Knowledge

The protection of traditional knowledge⁴¹ has been discussed in international fora over last few years,⁴² however, the Doha declaration has now put it at center stage.⁴³ There are several reasons for the issue's sudden move to the forefront. First, a large number of countries believe that up to now they have not derived great benefits from "traditional" forms of intellectual property, yet 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 looking at 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 very low cost.

In addition to the development of treaty provisions under the aegis of WIPO⁴⁴, which could serve, at least initially, to produce norms on a regional basis, work in the Doha Round might lead to political recognition of the validity of some of the demands made by TK-rich developing countries⁴⁵.

⁴¹ Traditional knowledge is shorter form of "traditional knowledge, innovations and practices". See, *e.g.*, the Convention on Biological Diversity, 5 June 1992, art. 8(j). The Draft U.N. Declaration on the Rights of Indigenous Peoples, U. N. Document E/CN.4/1995/, uses the expression "indigenous knowledge, cultures and traditional practices." In its more recent documents, WIPO uses the expression "traditional knowledge, innovations and creativity." See Intellectual Property Needs and Expectations of Traditional Knowledge Holders, WIPO Report on Fact-finding Missions on Intellectual Property and Traditional Knowledge 21-22 (1998-1999) 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 and Intellectual Property: A TRIPS-Compatible Approach" [2005] Mich. St. L. Rev. 137.

⁴² For WIPO activities in this area see <http://www.wipo.int/tk/en/>. See also Chakravarthi Raghavan, "ASEAN for Protecting Indigenous/Traditional Knowledge", Third World Network (May 5, 2000); John Mugabe, "Intellectual Property Protection and Traditional Knowledge: An Exploration in International Policy Discourse", (Dec. 1998); and Aaron Cosbey, "The Sustainable Development Effects of the WTO TRIPS Agreement: A Focus on Developing Countries" (March 1999).

⁴³ Paragraph 19 reads in part as follows: "[Ministers] instruct the Council for TRIPS, in pursuing its work programme [...] 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."

⁴⁴ WIPO. Draft Provisions on the Protection of Traditional Knowledge (TK) and Draft Provisions on the Protection of Traditional Cultural Expressions/Expressions of Folklore (TCEs). Available at http://www.wipo.int/tk/en/consultations/draft_provisions/draft_provisions.html.

⁴⁵ See Gervais, supra note 41.

E. Factors Influencing Current Changes

The changing face of international intellectual property in respect of traditional knowledge is confirmed *inter alia* by the reference in the Doha Declaration to Articles 7 and 8 of TRIPS, *i.e.*, the two provisions inserted originally to reflect the concerns of developing countries. Though they have been given little regard up to now in dispute-settlement proceedings in the WTO, these two provisions could be given a somewhat higher normative profile in future disputes because of what is a possible “special status” in the Doha text.

Article 7 is cut from the same tree as paragraph 17 of the Doha Declaration embodying the idea of balance between protection and access.⁴⁶ This need for balance is voiced of course by many people in industrialized countries, which is another factor contributing to the fundamental change of the intellectual property landscape. There is increasingly recognition that, while intellectual property is necessary in certain areas to justify research and development expenditure, the optimal configuration of intellectual property norms cannot be readily ascertained on the basis of available empirical data, as s discussed below in Part II. Any *ex ante* analysis of the “optimal system” is highly problematic and even *ex post* adjustments to the system are difficult to justify conclusively based on available data. There is, in other words, an unavoidable element of (hopefully somewhat educated) guessing in making intellectual property policy.

The international intellectual property landscape was altered fairly radically over the last few years. This change was ostensibly driven by three main factors. First, many newcomers at the intellectual property table, those who may not have fully grasped the scope and depth of TRIPS obligations they signed up to in 1994, now possess much more sophisticated knowledge in the area of intellectual property norms. That knowledge is provided in part by movements in “civil society” against intellectual property or at least against higher ip norms, which have led to a number of studies and alternative proposals⁴⁷. Better knowledge about

⁴⁶ See *supra* note 20.

⁴⁷ For a fairly comprehensive view, see Anselm K. Sanders, “The Development Agenda for Intellectual Property”, Inaugural Lecture, Universiteit Maastricht, May 2005. One could mention the work done, mostly since 1995, by several well-known actors, including Lawrence Lessig, Frederick Abbott, Peter Drahos, Jerome Reichman, and Carlos Correa, to name but a few. Of course, scholarly work on the impact and optimal structure of intellectual property did not start with TRIPS, but the clash between copyright and privacy on the Internet (see Daniel Gervais. “Use of Copyright Content on the Internet: Considerations on Excludability and Collective Licensing”, in M. Geist (ed.). Copyright Reform in Canada (Irwin Law, 2005) and the very public debacle over

intellectual property has also prompted the development of research into the second factor, namely a more complete recognition that theoretically at least intellectual property has an optimal protection point. In other words, more intellectual property does not necessarily work better when measured in terms of the effectiveness of implementing the policy objective of incentivizing (ex ante) or rewarding (ex post) innovation. To quote the Supreme Court of Canada on this point: “Excessive control by holders of copyrights and other forms of intellectual property may unduly limit the ability of the public domain to incorporate and embellish creative innovation in the long-term interests of society as a whole, or create practical obstacles to proper utilization.”⁴⁸

Falvey, Foster and Greenaway explain that balancing act as follows:

“A role for IPR protection arises because intellectual property displays many of the characteristics of a public good. It is typically non-rival and can be non-excludable. In the extreme these characteristics could remove the incentive to invest in R&D, and IPR protection can therefore restore that incentive. The importance of R&D and innovation has been emphasised by new growth theory[...]. In these models entrepreneurs invest in R&D in the expectation of profiting from their inventions. In addition to new products, innovation adds to a public stock of knowledge which lowers the cost of future innovation. Besides rewarding innovation, IPR protection stimulates the acquisition and dissemination of knowledge, since the information in patent claims is then available to other potential inventors. The rate of growth depends upon the rate of innovation and the stock of knowledge. Strong IPR protection need not always yield higher innovation and growth, however. Giving innovators too much protection may limit the spread of new ideas and lead to monopoly. Entry by rivals may be impeded, and successful innovators may have reduced incentives for developing and exploiting subsequent innovations.”⁴⁹

This allows us to posit that there must be an *intrinsic equilibrium* in intellectual property policies. Ideally, given the broader societal interests at play, one should not protect beyond what is necessary to achieve the policy objective(s) because the risk of a substantial negative general welfare impact is too high. However, as we will see below, it is extremely difficult to pinpoint that exact level, and governments thus have to make rules based on other criteria. One must also consider that many developing countries no longer accept the fact that TRIPS is a negative that must be accepted because of cross-sectoral concessions in the Uruguay Round. They want to learn how to benefit from intellectual property, maximizing the

pharmaceutical patents on HIV and malarial drugs in Brazil and South Africa have taken the issue out of (only) specialized circles and into the public spotlight.

⁴⁸ Th  berge v. Galerie d'Art du Petit Champlain inc., 2002 SCC 34, <http://www.lexum.umontreal.ca/csc-scc/en/pub/2002/vol2/html/2002scr2_0336.html>, [2002] 2 S.C.R. 336 at para. 32.

⁴⁹ Rod Falvey, Neil Foster and David Greenaway, “Intellectual Property Rights and Economic Growth” (2004). Internationalisation of Economic Policy Research Paper No. 2004/12. <http://ssrn.com/abstract=715982>, at 2.

positives⁵⁰ while minimizing the negatives in terms of higher consumer prices, job losses and other welfare costs. They also have a better understanding of the trade-strategic game in which they are necessarily players⁵¹.

The third and last factor influencing current changes is the increasingly visible intersection between intellectual property and other rights broadens the base of the search for balance. The search for an *extrinsic equilibrium* then becomes unavoidable. The interplay between the intrinsic and extrinsic equilibriums is apparent in a recent Canadian Supreme Court decision:

“Our Court has often spoken of ‘the balance struck under the *Patent Act*’ in which the public gives an inventor the right to prevent anybody else from using his or her invention for a period of 20 years in exchange for disclosure of what has been invented. As a general rule, if the patent holder obtains a monopoly for something which does not fulfil the statutory requirements of novelty, ingenuity and utility, then the public is short-changed. [...]

In the present appeal, the Court is required to consider this ‘balance’ in the much-litigated field of patented medicines, where Parliament is concerned not only with the balance between inventors and potential users, but between the protection of intellectual property on the one hand and, on the other hand, the desire to reduce health care costs while being fair to those whose ingenuity brought the drugs into existence in the first place.”⁵²

Indeed it seems difficult to contradict that intellectual property policy should be solidly based on economic grounds. It would seem almost absurd to limit the analysis of intellectual property to traditional natural right theories, such as the Lockean view of a right in one’s labour, or as a Kantian/Hegelian view of (mostly copyright) creations being imbued with their author’s personality (creating an inextinguishable link between the creator and the creation)⁵³. When the societal impacts of intellectual property are factored in, those philosophical views seem to provide insufficient justifications, at least when the debates focus not generally on

⁵⁰ Prof. Peter Yu explains that intellectual property may appeal to leaders in developing countries because it holds out the promise of new jobs, FDI, tax revenues, technology transfer and the development of local artists, inventors and indigenous industries. Peter K. Yu, “From Pirates to Partners: Protecting Intellectual property in China in the Twenty-First Century” (2000), 50 Am. U. L. Rev. 131, 192-3.

⁵¹ See Suzanne Scotchmer, *Innovation and Incentives* (MIT Press, 2004), at 329:

“...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.”

⁵² *Bristol-Myers Squibb Co. v. Canada* (Attorney General), 2005 SCC 26, at paras 1-2.

⁵³ “Natural rights are those which always appertain to [human beings] in right of [their] existence. Of this kind are all the intellectual rights, rights of the mind, and also all those rights of acting as individuals of [their] own comfort and happiness, which are not injurious to the rights of others.” (Thomas Paine, *The Rights of Man*). For a general overview of the various theories, see T. Fisher, “Theories of Intellectual Property”, in Stephen Munzer, ed., *New Essays in the Legal and Political Theory of Property* (Cambridge University Press, 2001).

whether intellectual property should exist⁵⁴ but on what it should protect, in what circumstances and for what period of time. That debate tends to be more productive when participants accept an instrumentalist version of utilitarianism as the proper starting point. That foundation recognizes that intellectual property is essential to avoid certain market failures, because ideas, creations and inventions are (without legal protection) non-exclusive and non-rivalrous, profits are not. In other words, while many people can share an idea, the same cannot be said in many cases of companies seeking to profit from the making and selling of creations or inventions embodying the idea. By the same token, however, intellectual property rules should aim to improve general welfare and be fair to social interests at play even if this cannot be or is not measured at the level of individuals. That is, in fact, the apparent paradox of intellectual property: the law grants a monopoly to allow society to gain access to new creations and inventions: to ensure that we can gain access, we limit access.

I suggest that the two results of the above analysis, namely the recognition of the two equilibria (intrinsic/extrinsic) and the adoption of an instrumentalist view of intellectual property are here to stay, at least for the predictable future. Future multilateral discussions will necessarily have to take that into account. That may explain why, as other Chapters of this book demonstrate, the best escape for those who do not want to explore this new policy terrain are quickly moving their ammunition to the bilateral field⁵⁵.

⁵⁴ A debate at that level is not altogether helpful. It often rests on a rejection of the dominant neo-liberal model and/or emphasizes the fact that corporations are only thinking on profits and those who manage them are only driven by greed and power. That said, the higher level critiques of the “system” may lead to better “corporate citizenship”. Cynics are quick to argue that those efforts are themselves usually marketing driven so as to allow the corporation to make more profit (and hence tends to demonstrate the fact that the two are not incompatible).

⁵⁵ See Ruth L. Okediji, “Back to Bilateralism? Pendulum Swings in International Intellectual Property Protection” (2003-2004) 1 Univ. Ottawa L. & Tech. J. 125, available at <http://www.uoltj.ca/articles/vol1.1-2/2003-2004.1.1-2.uoltj.Okediji.125-147.pdf>

Part II - Economic Analysis

A. Recent Economic Surveys

This Part looks at a number of recent analyses of available empirical evidence about the impact of intellectual property protection. Clearly, the analysis is far from exhaustive. It only tries to identify trends based on the latest available data.

- Impact of intellectual property protection on economic growth

As we embark on this analysis, it is worth noting that, in contrast to the very large number of studies dealing with the impact of intellectual property protection of one type or another in major industrialized nations, there is a relative dearth in empirical analyses of the nature and impact of intellectual property in developing economies⁵⁶. Studies are starting to emerge, however and those⁵⁷ consulted in the preparation of this paper offer a fairly blurred and

⁵⁶ Thus it is not surprising that in its proposal concerning WIPO's Development Agenda in June 2005 a group of Arab countries led by Bahrain proposed that WIPO should "prepare studies on intellectual property, in cooperation with Member States, to demonstrate the economic, social and cultural impact of the use of intellectual property systems in Member States, with particular emphasis on the contribution of cultural industries to national economies."

Proposal by the Kingdom of Bahrain on the Importance of Intellectual Property in Social and Economic Development and National Development Programs, WIPO document IIM/2/2, June 14, 2005, Annex, at p. 6.

| In his interesting book on intellectual property in China (see supra note 24) Professor William aptly notes: "...there are all too few attempts to portray [the] operation [of intellectual property] in any systematic fashion. Most such efforts are either anecdotal or uncritically dependent on data provided by trade associations and other interested parties [...] Moreover, the intangible nature of intellectual property complicates the detection of its unlawful appropriation."

(*Id.* at 6).

⁵⁷ Some of the recent most non-country-specific noteworthy efforts include: Carsten Fink and Keith E. Maskus (eds). Intellectual Property and Development (2004); Will Martin and L. Alan Winters. The Uruguay Round and Developing Countries (1996); Falvey et al., supra note 49; Suzanne Scotchmer, "The Political Economy of Intellectual Property Treaties" (2004), 20 J. of L. Econ. and Org. 415, 435-6: "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. [...] it 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."

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complex picture of the advantages of higher intellectual property protection in developing economies. A simple equation cannot be drawn between an increase in trade following the introduction of TRIPS-compatible intellectual property protection, on the one hand, and economic development on the other, especially when measured in terms of welfare increases⁵⁸. As Falvey, Foster and Greenaway stated in their 2004 study: “the overall effects of stronger IPRs on technology acquisition and aggregate growth are in general ambiguous.”⁵⁹ Differences in the level of economic development of each country⁶⁰ matter greatly. One must also make appropriate distinctions between the various types of intellectual property protection (patents, trade marks, copyrights, plant variety, etc.) or within a subsystem (patents for industrial machines compared to patents for pharmaceutical products, computer software or chemical agricultural inventions).

A study by Thompson and Rushing showed that IPRs were unlikely to generate positive effects below a certain minimum threshold of economic development. Thompson and Rushing had set that level at US\$3,400 (in 1980 dollars)⁶¹ or more than \$8300 in 2005 dollars. An interesting 2004 study by Falvey, Foster and Greenaway⁶², which used a different regression model, demonstrated the non-linearity of the relationship between IPRs and economic growth and identified “threshold effects”. Essentially, the level of the positive effect of IPRs depends on whether a developing country is capable of imitating and innovating. Otherwise, IPRs may merely reinforce the market power of exporters.

According to that study, IPR protection is growth enhancing in both low (beyond a strict minimum) and high income countries, but has only a small positive impact on growth in middle income countries. In fact for middle income countries, “no significant relationship was found” between the level of intellectual property protection and growth. In other words,

See also OECD Science, Technology and Industry Outlook 2004. (OECD, 2004); also by the OECD, Patents, Innovation and Economic Performance: Conference Proceedings (OECD, 2004); and the report of the UK IPR Commission, *infra* note 76, and accompanying text; and

⁵⁸ Carsten Fink and Carlos A. Primo Braga, “How Stronger Protection of Intellectual Property Rights Affects International trade Flows”, in Carsten Fink and Keith E. Maskus, *supra* note 56, 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, increase in overall economic development may not translate in a reduction of poverty. Other factors, such as wealth distribution and corruption are relevant. See, *e.g.*, Jagdish Bhagwati, *supra* note 11,

⁵⁹ *Supra* note 57, at 1.

⁶⁰ Something that TRIPS recognized at least indirectly by treating least-developing countries differently than developing ones. See TRIPS Article 66. See Falvey et al., *supra* note 57,

⁶¹ M.A Thompson and F.W. Rushing. “An Empirical Analysis of the Impact of Patent Protection on Economic Growth”, [1996] *J. of Econ. Dev.* 21, 61-79.

⁶² *Supra* note 49,

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poorer developing countries (but probably not least-developed ones) are poised to benefit from IPR protection due to inward Foreign Direct Investment (FDI) and new imports, as a new source of technology transfer. The Falvey, Foster and Greenaway study did not find any evidence that introducing intellectual property protection had reduced growth in any country.

- FDI vs trade

In parsing the results of available studies, it is clear that there are two main indicators that are helpful to analyse the precise impact of increasing intellectual property protection, namely (a) the increase of trade flows in goods that include a significant intellectual property component (as compared to the physical value of the material and components—two examples would be a music CD and a patented pharmaceutical molecule, areas which may be referred to as “intellectual property sensitive”; and (b) the increase in inward FDI concerning goods or services that require a high level of intellectual property protection. It is essential to measure both because, to a certain extent at least, they cancel each other out: a company in country A (export) may send goods to country B but it may instead opt for local production (under license) in country B.

On the link between trade flows and intellectual property, Carsten Fink and Carlos Primo Braga conclude one recent analysis as follows:

Economic analysis suggests that the effects of IPR protection on bilateral trade flows are theoretically ambiguous. Because of the complex static and dynamic considerations related to a policy of tighter protection, it is difficult to generate normative recommendations. When we estimate the effects of IPR protection in a gravity model of bilateral trade flows, our empirical results suggest that, on average, higher levels of protection have a significantly positive effect on nonfuel trade. However, this result is not confirmed when confining the estimation to high technology goods, for which we found IPRs to have no significant effect. These results are consistent with the literature.⁶³

Their analysis is based on data available from 89 countries. If their conclusion is correct, then higher levels of protection are useful in areas other than fuel (and presumably raw resources pre-value added transformation) and, surprisingly high technology⁶⁴. They suggest five

⁶³ Id., at 34.

⁶⁴ In fact those results seem at odds with Mansfield's 1994 study of US business executives, which found that IP protection influenced mostly executives in high tech industries. The study is referenced at note 7, *supra*. For a discussion, see Paul J. Heald, “Misreading a Canonical Work: An Analysis of Mansfield's 1994 Study” (2003), 10 J., of Int. Prop. L. 309.

possible explanations as to why there is no measurable positive impact in the case of high technology goods:

- strong market power which may offset the positive market expansion effects of higher protection;
- higher foreign direct investment (FDI) may lower international trade (as discussed above);
- it is possible that the impact of intellectual property protection was not accurately measured;
- factors in the destination country (country of export) may matter more than intellectual property. These include first mover advantage;
- finally, tariff and non-tariff barriers may impede trade flows⁶⁵.

These factors, they argue, could reduce the sensitivity to the level of intellectual property protection, seen as a mere adjuvant to protection stemming from market power or, at the other end of the axis, the absence of exports of FDI in a given country may be the result of factors other than the unavailability of enforceable adequate intellectual property rules. There may be softer issues at play, one could suggest, including cultural barriers or an imperfect dissemination of information about a country's situation. I will come back to this issue in Part III below.

In a recent analysis of the FDI component and its relation to intellectual property, Professor Maskus concluded as follows:

...although there are indications that strengthening IPRs can be an effective means of including additional inward FDI, it is only one component of a far broader set of important influences. Emerging economies should recognize the strong complementarities among IPRs, market liberalization and deregulation, technology development policies, and competition regimes.⁶⁶

While one may agree with the "broader picture" painted by the author, unfortunately the conclusions of the study are based on IMF data showing increases in inward and outward FDI between the years 1987 and 1995. In many cases, IPR protection increased sharply after the

⁶⁵ Id., at 28.

⁶⁶ Keith E. Maskus, "Intellectual Property Rights in Encouraging FDI and Technology Transfer", in Carsten Fink and Keith E. Maskus (eds), supra note 56, at 70-71.

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entry into force of the TRIPS Agreement in developing countries, which, except for least-developed ones, had until January 2000 to comply⁶⁷. In China's case, the date of TRIPS compliance coincided with its becoming a WTO member on December 11, 2001⁶⁸. Pre-2000 data may thus not offer ideal parameters to do a full analysis of the current situation. Another study dealing with China tended to show that there was only a weak correlation between higher intellectual property and increased FDI in that market⁶⁹, perhaps as a reflection of the size of the Chinese market and the political clout of the "new China".

In another analysis of the situation in China, economists found that there had been a very significant increase in patent and trademark activity in China. Their data tended to show that:

...IPRs are effective devices for handling particular market failures associated with cultural creation and invention and technology use. These market failures become more acute as economies grow, meaning that the need for effective patents, trademarks, trade secrets protection, and copyrights increases over time.⁷⁰

However, they also concluded that

...stronger IPRs alone are not sufficient to establish effective conditions for technology development and growth. Rather, they must be embedded in a broader set of complementary initiatives that maximize the potential of IPRs to be dynamically procompetitive.⁷¹

A different study concerning the situation of FDI in so-called "transition economies"⁷² is perhaps more illuminating because those countries were for the most part closed to FDI until 1990 or so. The study concludes confirmed intuitive conclusions, in particular that FDI in intellectual property sensitive areas is discouraged when intellectual property protection is

⁶⁷ TRIPS Agreement, Article 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 (TRIPS Article 65(4)).

⁶⁸ See www.wto.org (last accessed July 2, 2005). See also Yahong Li, "Pushing For Greater Protection – The Trend Toward Greater Protection of Intellectual Property in the Chinese Software Industry and the Implications for the Rule of Law in China" (2002), 23 U. Pa. J. Int'l Econ. L. 637.

⁷⁰ Keith E. Maskus, Sean M. Dougherty and Andrew Mertha, "Intellectual Property Rights and Economic Development in China", in *id.*, at 327.

⁷¹ *Id.*

⁷² Essentially countries in Central and Eastern Europe that formed part of the former Soviet block. Article 65(3) of the TRIPS Agreement refers to them as "Member[s] which [are] in the process of transformation from a centrally-planned into a market, free-enterprise economy and which [are] undertaking structural reform of [their] intellectual property system."

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weak; and that, across all sectors, low IPR protection encourages foreign firms to focus on distribution rather than local production⁷³.

In the specific area of pharmaceuticals, available data analyzed in another study show that, at least for the large Indian market, the introduction of patent protection is likely to lead to both price increases (and related welfare effects) and increased research and development.

However, the research also shows that only 10.9% of the top 500 pharmaceuticals in that market are patented. Additionally, the government retained certain tools, including price controls and, in cases where this is allowed by Article 31 of TRIPS, compulsory licenses⁷⁴.

In an analysis in a much different and smaller market, namely Lebanon, a team of economists concluded that introducing TRIPS-compatible intellectual property protection would lead to:

...additional technology transfer [to Lebanon] and further local product development. The average quality of products and services on the market should rise. Although the associated price effects would be problematic for low-income consumers, there should be dynamic gains from greater efficiency of inputs over time, while consumers will benefit from additional certainty about the signalling value of trademarks⁷⁵.

The 2002 Report produced by the UK Commission on Intellectual Property Rights⁷⁶ presented a picture generally in agreement with the above findings but also stressed that it was important not to consider developing countries as a homogeneous group. As the Report noted:

...it is important to remember the technological disparity between developed and developing countries as a group. Low and middle income developing countries account for about 21% of world GDP, but for less than 10% of worldwide research and development (R&D) expenditure. The OECD countries spend far more on R&D than India's total national income. Almost without exception, developing countries are net importers of technology.

It is essential to consider the diversity of developing countries in respect of their social and economic circumstances and technological capabilities. Altogether more than 60% of the world's poor live in countries that have significant scientific and technological capabilities, and the great majority of them live in China and India. China and India,

⁷³ See Beata Smarzyska Javorcik, "The Composition of Foreign Direct Investment and Protection of Intellectual Property Rights: Evidence from Transition Economies" (2004), 48:1 Eur. Econ. Rev. 39.

⁷⁴ See Carsten Fink, "Patent Protection, Transnational Corporations, and Market Structure: A Simulation Study of the Indian Pharmaceutical Industry" in Carsten Fink and Keith E. Maskus (eds), supra note 56, at 250-1.

⁷⁵ Keith E. Maskus, "Strengthening Intellectual Property Rights in Lebanon", in Carsten Fink and Keith E. Maskus (eds), supra note 56, at 289.

⁷⁶ Entitled Integrating Intellectual Property Rights and Development Policy (2002), available at http://www.iprcommission.org/graphic/documents/final_report.htm

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along with several other smaller developing countries, have world class capacity in a number of scientific and technological areas including, for instance, space, nuclear energy, computing, biotechnology, pharmaceuticals, software development and aviation. By contrast, 25% of poor people live in Sub-Saharan Africa (excluding South Africa), mainly in countries with relatively weak technical capacity. It is estimated that in 1994 China, India and Latin America together accounted for nearly 9% of worldwide research expenditure, but sub-Saharan Africa accounted for only 0.5% and developing countries other than India and China only about 4%.

Thus developing countries are far from homogeneous, a fact which is self-evident but often forgotten. Not only do their scientific and technical capacities vary, but also their social and economic structures, and their inequalities of income and wealth. The determinants of poverty, and therefore the appropriate policies to address it, will vary accordingly between countries. The same applies to policies on IPRs. Policies required in countries with a relatively advanced technological capability where most poor people happen to live, for instance India or China, may well differ from those in other countries with a weak capability, such as many countries in sub-Saharan Africa. The impact of IP policies on poor people will also vary according to socio-economic circumstances. What works in India, will not necessarily work in Brazil or Botswana.⁷⁷

In sum, economic analysis on the IP/FDI/Trade economic triangle tends to demonstrate that sufficient intellectual property protection is an essential component of increased inward FDI and trade flows (in intellectual property 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. This seems consistent with studies that tend to show that the propensity to patent (as opposed to, *e.g.*, protect as confidential information) is also directly dependent on such factors⁷⁸. It also shows that not all

⁷⁷ *Id.* at pp. 1-2 (footnotes omitted).

⁷⁸ See Nancy Gallini, Jon Putnam and Andrew Tepperman, "Intellectual Property Rights and the Propensity to Patent", paper prepared for the OECD Conference on Intellectual Property and Innovation in the Knowledge-based Economy (May 2001). Available at <http://strategis.ic.gc.ca/pics/ip/gallini.pdf> (last accessed July 2, 2005); Wesley Cohen., Richard R. Nelson and John Walsh, "Protecting their intellectual assets: Appropriability conditions and why U.S. manufacturing firms patent (or not)," NBER Working Paper 7522 (2000); and John P. Walsh, Ashish Arora and Wesley M. Cohen, "Effects of Research Tool Patents and Licensing on Biomedical Innovation," in Wesley M. Cohen and Stephen A. Merrill (eds). Patents In The Knowledge-Based Economy (Nat'l Academies Press, 2003), 285-286:

Over the last two decades changes in technology and policy have altered the landscape of drug discovery. These changes have led to concerns that the patent system may be creating difficulties for those trying to do research in biomedical fields. [...] We find that there has in fact been an increase in patents on the inputs to drug discovery ("research tools"). However, we find that drug discovery has not been substantially impeded by these changes. We also find little evidence that university research has been impeded by concerns about patents on research tools. Restrictions on the use of patented genetic diagnostics, where we see some evidence of patents interfering with university research, are an important exception. There is, also, some evidence of delays associated with negotiating access to patented research tools, and there are areas in which patents over targets limit access and where access to foundational discoveries can be restricted. There are also cases in which research is redirected to areas with more intellectual property (IP) freedom.

developing or least-developed nations can be treated alike. It seems that whether a particular country has the capacity to make good use of an imported technology and eventually to compete with its own research and development efforts (including to adapt the technology to local demand, if need be) are determinative.

- FDI vs “comfort levels”

Those conclusions are hardly surprising. It is well known that FDI decisions are based on the level of “comfort” of global technology exporters. The impact is greater as the intellectual property sensitivity increases, though not necessarily for high technology goods, probably due to the factors identified by Fink and Primo Braga⁷⁹. The difference in “comfort level” can be measured by comparing the rise in research and development expenditures in various recipient countries. For example, in OECD countries, where intellectual property and a number of other normative aspects are harmonized, and where business and cultural ties may, in certain cases, be relevant, the picture which emerges is fairly clear:

Recent analysis based on firm-level data indicates that MNEs make sizeable contributions to productivity growth in their home and host countries and are important conduits for technology transfer. MNEs accounted for more of the growth in labour productivity in Belgium, the United Kingdom and the United States than uni-national or unaffiliated domestic firms; they also contributed to technological spill-overs that improve innovative performance in both home and host countries⁸⁰

And at 333-4:

We have observed that holders of IP on nonrival research tools often charge prices that permit broad access, at least among firms. In some of these cases, the IP holders have also charged higher prices to commercial clients and lower prices to university and other researchers who intended to use the tool largely for noncommercial purposes. From a social welfare perspective, such price discrimination expands the use of the tool and is welfare enhancing. There are, however, cases in which the IP holder cannot or does not develop a pricing strategy that allows low-value and academic projects access to the tool[...]

The concern with regard to IP access tends to be the greatest when a research tool is rival-in-use and is potentially key to progress in one or more broad therapeutic areas. When a foundational research tool is rival-in-use, the IP holders often either attempt to develop the technology themselves or grant exclusive licenses. As suggested above, exclusive exploitation of a foundational discovery is unlikely to realize the full potential for building on that discovery because no one firm can even conceive of all the different ways that the discovery might be exploited, let alone actually do so. [...] The social welfare analysis of this situation is, however, not straightforward. Even though knowledge, once developed, can be shared at little additional cost and may be best exploited through broad access, it does not follow that social welfare is maximized by mandating low-cost access if such access dampens the incentive to develop the research tool to begin with. Many of the same kinds of “working solutions” that mitigate the prospect of an anticommons also apply to the issue of access for research. Our interviews suggest that a key “working solution,” however, is likely infringement under the guise of a “research exemption.”

⁷⁹ See supra note 65, and accompanying text.

⁸⁰ OECD Science, Technology and Industry Outlook 2004, supra note 56, at 17-18.

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And further:

Foreign affiliates account for a growing share of business R&D. Although R&D remains less internationalised than production, total R&D expenditures of foreign affiliates increased between 1991 and 2001 by more than 50% in the OECD area. In 2001, foreign affiliates accounted for 15% to 20% of total manufacturing R&D in France, Germany and the United States; between 30% and 40% in Canada, the Netherlands, Spain, Sweden and the United Kingdom; and more than 70% in Hungary and Ireland. Not surprisingly, R&D investments by foreign affiliates are highly sector-specific, with the ICT, chemicals (including pharmaceuticals) and transport sectors accounting for the vast majority. While patterns of R&D investment by foreign affiliates correspond to patterns of manufacturing investment, the location of business R&D is influenced not only by the need to tailor products to local markets but also by a desire to tap into local sources of scientific and technical knowledge. Nevertheless, the R&D intensity (R&D as a share of turnover) of foreign affiliates is below that of firms indigenous to the host country in all countries except Hungary and Ireland, and by a wide margin in most cases.⁸¹

OECD statistics show that total net FDI (outflows minus inflows) for the years 1990, 1995, 1998, 1999, 2000 and 2001 stood at 1.02 trillion US dollars, 862 billion US dollars of which (85%) came from the 15 pre-expansion member countries of the European Union⁸². The same statistics show that while the total penetration in manufacturing (defined as the percentage of imports in domestic demand) grew in OECD countries from 20% to 26% between 1992 and 1999, in the high-technology manufactures area,⁸³ that percentage grew from 31% to 43% and in pharmaceuticals specifically from 17% to 27%⁸⁴. And it must be borne in mind in that respect that almost all patents and trademarks belong to enterprises based in Western Europe, North America and Japan:

By 2001, R&D spending in [China, Israel and the Russian Federation] had risen to USD 85 billion, or 14.7% of OECD R&D expenditures. When a fuller set of non-member economies, including Argentina, Romania, Singapore and Chinese Taipei, are added to the calculation, the share rises to 17%. Hence, while R&D spending has grown rapidly in non-[OECD]member economies, it remains at about one-sixth the level of OECD countries. Relative shares of patent families show a similar pattern. The United States, the EU25 and Japan accounted for 94.4% of all triadic patent families in 1991; by 2000, that share had declined modestly to 92.7%, with most of the reduction in the shares of EU and Japanese patent holders. The share of all countries outside the United States, EU25 and Japan rose from 5.6% to 7.3%. It can be expected that this share will continue

⁸¹ Id. at 170.

⁸² Id., at 234.

⁸³ Pharmaceuticals, office and computing machinery; radio, television and communication equipment; medical, precision and optical instruments; and aircraft and spacecraft

⁸⁴ OECD Outlook, *supra* note 56, at 233.

to rise as other countries become more fully integrated into global innovation structures.⁸⁵

The same data confirm a significant growth in both exports and global research and development. Two important caveats are in order, however. First exports grew more quickly than “delocalized” R&D. Second, the growth in exported R&D activity wa/s far from uniform, with growth in OECD countries outpacing most non OECD member countries, with some exceptions, especially China, Israel and the Russian Federation.

More importantly perhaps for our purposes, there seems to be 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 intellectual property rules allow foreign firms to begin exporting intellectual property 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, though it may also 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 price⁸⁶. Increased trade flows may lead to new jobs in distributorships and the retail sector, but those are likely to be low-skilled, low-paying positions. There may also be significant gains in terms of product quality and reliability, especially in the area of pharmaceuticals.

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

If one were to pinpoint sector-specific impacts, it would seem reasonable to conclude that in the copyright area music, films and books are unlikely to be distributed--and national cultural industries able to develop--in the absence of sufficient rights and enforcement options. In those areas, the gains generated by establishing sufficient protection are “unambiguous.”⁸⁷ However, the introduction or beginning of enforcement of copyrights will lead to the closure

⁸⁵ Id., at 39.

⁸⁶ See Falvey et al, supra note 49, at 2.

⁸⁷ Keith E. Maskus, “Strengthening Intellectual Property Rights in Lebanon”, supra note 75, at 286.

of businesses that rely on copying, thus displacing (mostly unskilled) workers. Hopefully, some of them will be able to find work in the new, creative industry jobs made possible by the adequate protection of copyrights⁸⁸. These new jobs are likely to pay higher wages and stimulate creativity, while reducing the need felt by local creators to live in higher protection countries, but as exiles. In high technology areas, such as computer chips or advanced electronic components, the level of protection is possibly less crucial due, at least in part, to the lack of ability to reverse engineer and produce pirated versions, and the market power of the main international players⁸⁹.

Trade mark protection is an essential ingredient to generate higher inward FDI. The purpose of trade marks is two-fold: first, to protect the public by indicating the source of goods and services in order that purchasers can identify the level of quality they seek and receive a similar product or consistent service over time; and second, to protect the trade mark 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 buy a product or service because consciously or unconsciously they associate qualities such as value, excellence, or efficiency, with the trade mark. The capacity of a mark to raise these associations explains why a strong trade mark is invaluable--it directs a potential buyer towards a company's own product or service rather than those of a competitor. Trade marks are influenced both by seller's perceptions about buyer psychology and the public's marketing-influenced perceptions of goods and services and how they are differentiated. Trade marks also serve an informational purpose: The legal protection of marks gives companies an incentive to invest in making their marks more easily recognized and more easily remembered by consumers so consumers can identify which particular good or service they want, and consumers save time searching for the appropriate product or service.

Trademark protection will, as in the case of copyrights, lead to the closure of businesses producing counterfeit goods, but that economic activity could be replaced by jobs in distribution, retail and franchises⁹⁰. These are often low-level, low-skilled jobs, however. Trade mark protection will also benefit consumers who will benefit from "genuine" goods,

⁸⁸ See id., at 286-7.

⁸⁹ See supra note 65, and accompanying text.

⁹⁰ See Amir H. Khoury. The Effects of Trademarks on Arab Countries in the Middle East. Doctoral dissertation, University of Haifa (2005).

i.e., goods that come with the assurance of quality associated with the mark through domestic or international advertising and reputation. Over time, the experience in product assembly, delivery and servicing, as well as management acquired in franchise and distributorship arrangements may be transferred to new, local businesses.

The area of patents is also critically important, but not because patent ensures 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 reverse because global firms that rely on patent protection need assurances about the level of protection and enforcement before considering any significant technology transfer. Working a patent often requires know-how 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 (confidential information) 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 process⁹¹, many companies prefer not to disclose new processes in patent applications⁹². 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, who sometimes bend over backwards to attract foreign firms⁹³.

B. “Balance”

“...our goal, which we hope is one that can be shared by all Member States, of ensuring that the international IP system functions for the good of all, with benefits outweighing any costs and in a way which encourages, and does not hinder, sustainable economic, social and cultural development.”⁹⁴

⁹¹ Article 34(1) of the TRIPS Agreement reads in relevant part as follows:

...if 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.

⁹² See Wesley Cohen., Richard R. Nelson and John Walsh, *supra* note 78; and Stephen A. Merrill, Richard C. Levin, and Mark B. Myers, *A Patent System for the 21st Century* (Nat'l Academies Press, 2004), at 20-23.

⁹³ See Beata Smarzyska Javorcik, *supra* note 73, at 60.

⁹⁴ Proposal by the United Kingdom to the Inter-Sessional Intergovernmental Meeting on a Development Agenda for WIPO (Annex), WIPO Document IIM/2/3, June 14, 2005.

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Balance is ostensibly what everyone is striving towards⁹⁵. But what is it? It is not, contrary to what often reads or hears in policy debates concerning intellectual property, a simple axis with rightsholders at one end, and users of intellectual property on the other. For one thing, there is no uniform categorization that holds up to serious scrutiny. All rightsholders have to get their “inspiration” from somewhere or someone.

How can a government who wishes to do so adopt a “balanced” innovation policy? Should that government err on the side of high protection or rather protect the “public domain” and limit protection until a need for protection is shown? Should it take the policy gamble of increasing protection to see if it produces positive results without major or even overwhelming negative externalities? Clearly, it seems easier to make intellectual property *ex post facto* and adjust the framework, rather than wait for a perfect model to emerge from theoretical economic analysis. That analysis is complex *inter alia* because each sector of intellectual property (and sub-sectors: should industrial machines, business models, biotechnology, HIV drugs and chemical agricultural products be treated the same because they are protected by patents?). I suggest that not only should a government favour a “balanced” approach, it must also decide where to intervene and when.

Balance, then, is far from being a simple game of “pulling covers” and trying to please the often short-sighted demands of lobbies representing rightsholders or various users or public interest groups. Balance means achieving an optimal degree of protection, which appropriately protects and rewards creativity and ingenuity, thus providing a good incentive

⁹⁵Examples include: Federal Trade Commission, “To Promote Innovation: The Proper Balance of Competition and Patent Law and Policy Executive Summary,” 19 Berkeley Tech. L.J. 861 (2004); Suzette Rodriguez Hurley, “Failing to Balance Patent Rights and Antitrust Concerns: The Federal Circuit’s Holding in *In Re Independent Service Organizations* Antitrust Litigation” (2003-04), 13 Fed. Circuit B.J. 475; Peter J. Gardner, “U.S. Intellectual Property Law and the Biotech Challenge: Searching for an Elusive Balance” [2003] B.J. 28; Holly Soehnge, “The Drug Price Competition and Patent Term Restoration Act of 1984: Fine-Tuning the Balance Between the Interests of Pioneer and Generic Drug Manufacturers” (2003), 58 Food & Drug L.J. 51; Keith E. Maskus, Eina Vivian Wong, “Searching for Economic Balance in Business Method Patents” (2002), 8 Wash. U. J.L. & Pol’y 289; Arnoldo Lacayo, “Seeking A Balance: International Pharmaceutical Patent Protection, Public Health Crises, and the Emerging Threat of Bio-Terrorism” (2002), 33 U. Miami Inter-Am. L. Rev. 295; John S. Golian, “Without a Net: The Supreme Court Attempts to Balance Patent Protection and Public Notice in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*” (2003), 36 Creighton L. Rev. 541; James Langenfeld, “Intellectual Property and Antitrust: Steps Toward Striking a Balance” (2001), 52 Case W. Res. L. Rev. 91; John A. Harrelson, “TRIPS, Pharmaceutical Patents, and the HIV/AIDS Crisis: Finding the Proper Balance Between Intellectual Property Rights and Compassion” (2001), 7 Widener L. Symp. J. 175; Thorsten Klein, “The Uncertain Balance Between Parody and Trademark Rights” (2001), 12 J. Contemp. Legal Issues 356; Richard G. Frenkel, “Intellectual Property in the Balance: Proposals for Improving Industrial Design Protection in the Post-TRIPS Era” (1999), 32 Loy. L.A. L. Rev. 531; Allan N. Littman, “Restoring the Balance of Our Patent System” (1997), 37 IDEA 545; John C. Yates Michael R. Greenlee Intellectual Property on the Internet: Balance of Interests Between the Cybnauts and the Bureaucrats” (1996), 8:7 J. Proprietary Rights. 8.

to continue, while not deterring others' creativity and inventiveness. That optimal point is hard to define, and in fact will likely vary from country to country based on socio-economic, industrial and even cultural factors⁹⁶, as will be more fully explained below.

Because TRIPS establishes a uniform normative "common denominator", its implementation should be a combination of a careful analysis of the proper intellectual property policy of a country or region and use of flexibility left in TRIPS to achieve this policy objective. That determination of the most appropriate TRIPS-compatible legal framework must then be combined with corresponding policies in relevant sectors, use of systems such as compulsory licensing but only where appropriate etc., as well as training of government and private sector players. While this may seem self-evident, one of the most striking problems of many developing countries as a group is the absence of advanced research on determining an adequate intellectual property policy to maximize a country's growth, culturally and economically. There are, however, signs that this is changing, in countries like Brazil, China and India for instance.

This kind of analysis is necessary because the pre-TRIPS historical development of norms was a haphazard process and may not offer sufficient economic, social or philosophical justifications for continuing along the same path without further analysis⁹⁷. In parallel, many countries argue that major industrialised countries only adopted high protection norms *after* they had developed economically. All this is now strongly reinforced by views emerging within industrialized countries not only about the possible negative impact of imposing too high protection norms on developing countries but also on the development of a vibrant technological and creative culture.⁹⁸ But, as will be seen below, those may not be valid reasons to pour scorn on TRIPS.

C. WIPO's Development Agenda

⁹⁶ See, e.g., William P. Alford, *supra* note 24.

⁹⁷ See Daniel Gervais "Spiritual But Not Intellectual? The Protection of Sacred Intangible Traditional Knowledge" (2003), 11 Cardozo J. of Int'l & Comp. Law 467-495.

⁹⁸ See Lawrence Lessig. *Free Culture: How Big Media Uses Technology and the Law to Lock Down Culture and Control Creativity* (Penguin Books, 2004). Examples range from open source software to creative commons in the field of copyright to analyses of the sometimes poor social value of letting only the market dictate the path of innovation.

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A more “balanced” approach to intellectual property regulation was adopted by the World Intellectual Property Organization (WIPO). Argentina and Brazil put forward a proposal for the establishment of the development agenda for WIPO in August 2004.⁹⁹ The proposal was supported by a number of developing countries, as well as civil society and non governmental organizations.¹⁰⁰ After intensive negotiations,¹⁰¹ the WIPO General Assembly adopted Decision on a Development Agenda¹⁰² based on the proposal by Argentina and Brazil. WIPO was to conduct inter-sessional intergovernmental meetings to examine this issue and prepare a report by July 31 2005 to be considered by the WIPO General Assembly in September 2005. Following that decision, the “Civil Society Coalition,” which represents a number of non-governmental organizations, issued a much publicized statement about the Agenda.¹⁰³ The Coalition proposed a new Treaty on Access to Knowledge,¹⁰⁴ which should, *inter alia*, include the implementation of Articles 4, 5, 6 and 7 of the Doha Declaration on TRIPS and Public Health, and the implementation of Articles 7, 8 and 40 of the TRIPS Agreement. The proposals under consideration include several references to the TRIPS Agreement (Articles 7 & 8). The WIPO inter-sessional meetings were held in April, June and July of 2005, with a new proposal being tabled by the African Group of Countries¹⁰⁵ and followed by another Statement of the civil society groups.¹⁰⁶ After intensive negotiations the July meeting ended without a consensus on the process for further negotiations.¹⁰⁷ Negotiations resumed in August 2005 in order to draft the Report for the WIPO General Assembly, which will also

⁹⁹ Proposal by Argentina and Brazil for the Establishment of a Development Agenda for WIPO, Aug. 27, 2004, WIPO document WO/GA/31/11, http://www.wipo.int/documents/en/document/govbody/wo_gb_ga/pdf/wo_ga_31_11.pdf.

¹⁰⁰ See Geneva Declaration on the future of WIPO, <http://www.cptech.org/ip/wipo/futureofwipodeclaration.html>. The development agenda has been supported by “Five hundred scientists, academics, legal experts and consumer advocates, including two Nobel laureates”. Frances Williams “Development needs ‘override intellectual property protection”” Financial Times, Sept. 30, 2004, 2004 WL 93033069. See also James Boyle, “A Manifesto on WIPO and the Future of Intellectual Property”, (2004) Duke L. & Tech. Rev. 0009, online <http://www.law.duke.edu/journals/dltr/articles/2004dltr0009.html>.

¹⁰¹ “Clash likely on intellectual property rights” Financial Times, Tuesday, September 14, 2004, 2004 WL 93029614; Frances Williams “Development needs ‘override intellectual property protection””. BRIDGES Weekly Trade News Digest - Vol. 8, Number 33, Oct. 6, 2004.

¹⁰² General Assembly Decision on a Development Agenda, Oct. 4, 2004.

¹⁰³ Civil Society Coalition Statement on WIPO General Assembly Decision on a Development Agenda, October 4, 2004, <http://www.civilsocietycoalition.org/wipo/csc10042004.html>

¹⁰⁴ <http://www.cptech.org/a2k/consolidatedtext-may9.pdf>

¹⁰⁵ Proposal by Morocco on Behalf of the African Group Entitled “The African Proposal for the Establishment of a Development Agenda for WIPO”, WIPO document IIM/3/2, http://www.wipo.int/edocs/mdocs/mdocs/en/iim_3/iim_3_2.pdf.

¹⁰⁶ WIPO: Development Agenda -- IIM/3 NGO Statement, http://www.ipjustice.org/WIPO/IIM3/IIM3_NGO_stmt_DA.shtml

¹⁰⁷ “Consensus Just out of Reach on Way Forward for WIPO Development Agenda”, BRIDGES Weekly Trade News Digest - Vol. 9, Number 27, Jul. 27, 2005. <http://www.ictsd.org/weekly/05-07-27/story5.htm>

decide on the process for further negotiations. It remains to be seen how will these negotiations unfold and what will be the impact of these developments.

D. Bilateral Trade Agreements and Intellectual Property

Post-TRIPS development has been going into two (arguably diverging) ways – TRIPS related development within WTO, as well as the recent developments in 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, including broad exceptions to obligations to obtain permissions and licenses. On the other hand, intellectual property developments in recent bilateral and regional trade agreements mirror the so-called maximalist approach.¹⁰⁸ The latter trend to regulate intellectual property rights through bilateral regimes may not be immediately threatening to the approach of WTO and WIPO, but these bilateral initiatives likely will have a significant impact in the long run.¹⁰⁹

¹⁰⁸ For example, recent US Trade Agreements export the Digital Millennium Copyright Act, Pub. L. No. 105-304, 112 Stat. 2860 (1998), a specific piece of legislation concerning the protection and circumvention of Technological protection measures (TPMs) that fits into the whole of the US Copyright Act, with its various safeguards, including constitutional protections stemming from the Bill of Rights. 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. See United States Bilateral Trade Agreements with Morocco, Chile, Bahrain, Australia and Central American Free Trade Agreement (http://www.ustr.gov/Trade_Agreements). These provisions are also being negotiation in a number of other agreements as well as within the Free Trade Area of Americas. See Susan Sell, supra note 7, at 121-162.

¹⁰⁹ Professor Peter K. Yu from Michigan State University labels this approach as the double backdoors in international intellectual property lawmaking”. If a number of countries import higher level of intellectual property protection, it is likely that that high level will be codified as the existing norm in is any revision of TRIPS. See Gervais, supra note 8, at p. 68

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Part III - Towards a Comprehensive Knowledge Strategy

Many of the studies mentioned in Part II insist on the fact that sufficient and adequate intellectual property protection is but one ingredient in a complex recipe to achieve innovation-based economic development. Put differently, IPR protection is essential, but in itself insufficient to ensure growth. In fact, by themselves, intellectual property rules arguably benefit mostly major owners of intellectual property, who are largely concentrated in a few highly industrialised countries¹¹⁰. To successfully exploit intellectual property to maximize its economic growth in areas that are information and intellectual property-intensive and be able to produce goods and services with a higher ideational content (which is what intellectual property rules tends to protect), each country needs a comprehensive knowledge optimization strategy. The adequate protection of commercially or industrially relevant knowledge necessarily forms part of such a strategy.

If the above seems a fair conclusion in light of 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 intellectual property factor in the growth of bilateral trade flows and foreign direct investment (FDI). It is even more difficult to determine *ex ante* what the optimal level of protection is. 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. *Ex post* analysis is not a policy panacea either due to the uneven quality of econometric studies, in turn due to the quality of available (vs ideal) field of empirical data. However, I suggest that what is a problem in theory actually forms part of the solution once we shift to policy-setting.

The TRIPS Agreement is the strongest normative vector in setting intellectual property policy. In other words, because WTO members cannot legislate below the TRIPS levels without incurring the risk of dispute-settlement proceedings under the Dispute-Settlement Understanding,¹¹¹ and because it is unlikely that TRIPS norms will be diluted in the Doha

¹¹⁰ According to UNIDO, 94% of all privately-funded research and development was located in those countries during the 1990s. See UNIDO, *Industrial Development Report 2002/03* (Vienna, 2002).

¹¹¹ WTO Agreement, Annex 2, Understanding on Rules and Procedures Governing the Settlement of Disputes, *in* Results of the Uruguay Round, supra note 8, [hereinafter “DSU”].

Round¹¹², one it would seem to be pragmatically justified to take TRIPS as a given quantity in the policy equation. The remaining parts of the equation are to determine how the reasonably available flexibility in implementing the Agreement should be used, which should only be done, I would submit, as part of a comprehensive domestic strategy. I will argue below that, integrating TRIPS norms into such a strategy is tactically sound and that by and large TRIPS strikes an adequate balance if properly implemented.

What emerges below as a strategy is certainly not a series of measures designed to nominally implement TRIPS rules and find loopholes that essentially shrink the protection away. Certain proposed interpretations of Articles 27 and 30 of TRIPS¹¹³, or the fact that the Agreement in many cases imposes no clear rules as to the ownership of IPRs may mean that a country can formally implement TRIPS while systematically de-implementing parts of it through legal “gimmickry” while “getting away with it” as far as the WTO dispute-settlement system is concerned. The objective of this chapter is not to suggest ways to avoid being found “guilty” by a WTO panel. Rather, it is to optimize knowledge and economic development using TRIPS rules as an ingredient. This may involve some flexibility in the TRIPS implementation process but as part of a comprehensive strategy.

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

See also Gervais, *supra* note 8, at pp. 340-44.

One should note that not all countries are equal when it comes to the DSU. The EU and US have resisted applying decisions of the DSU that found their legislation incompatible with their WTO obligations. The long-standing dispute between the EU and the so-called “dollar banana” countries (*see* Conditions for the Granting of Tariff Preferences to Developing Countries, document WT/DS246/AB/R) is an example, while in the United States a panel decision concerning the incompatibility of exceptions contained in s. 110(5)(b) of the Copyright Act rendered in 2000 remains unimplemented as of this writing (July 2005).

¹¹² See Gervais, *supra* note 8, at pp. 43-51.

¹¹³ For example, UNCTAD recently suggested that

The 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.

UNCTAD. Course on Dispute Settlement: WTO: Module 3.14 TRIPS, UNCTAD/EDM/Misc.232/Add.18, http://www.unctad.org/en/docs/edmmisc232add18_en.pdf (2003), at 20.

I do not believe that a WTO DS panel would agree with this interpretation.

On 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” that may a panel may not agree with.

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As mentioned previously,¹¹⁴ it is difficult and probably impossible on the basis of available empirical data to determine the optimal level of intellectual property protection. Is the best term of protection of a patent 20 years, 18 or 22? Or is it 5 or 35? One would probably be led to conclude that, for certain forms of invention--indeed for specific inventions--, a certain term is optimal, while a different one is more adequate in a different context¹¹⁵. This analysis could depend, for example, on the added value of the invention, which depends in turn on the size of its inventive step¹¹⁶ 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. This interesting theoretical discussion led a Canadian economist to suggest a protection term based on the social value of non-lifestyle pharmaceutical inventions¹¹⁷. However, even if such a proposal could pass the test of transaction costs, experts could only guess the future utility of the invention. In terms of predictability, time, and transition/protection costs, a single term may thus be a better, if theoretically less refined solution. It is certainly simpler.

TRIPS, one could argue, is a valid instrument also because it harmonizes national laws only to a degree¹¹⁸. This is not the place for a summary of the content of TRIPS¹¹⁹. Evidently, it contains more than simple wishes, in contrast to many provisions of the Paris Convention¹²⁰.

¹¹⁴ See Part II.

¹¹⁵ One *ex post* sign would be whether the invention is still actively being worked at the expiration of the patent. But then again, if only inventions whose value had lapsed fell into the public domain, the societal value of granting a 20-year monopoly would come into question. Then again, 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*" (2003), 26 Hamline L. Rev. 679, 694-5. 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" (2004), 104 Colum. L. Rev. 272, 338-9.

¹¹⁶ 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.

¹¹⁷ See Aidan Hollis, "An Efficient Reward System for Pharmaceutical Innovation" (2004), available at <http://econ.ucalgary.ca/fac-files/ah/drugprizes.pdf> (last accessed March 28, 2005).

¹¹⁸ See Reichman, Jerome H., "The TRIPS Agreement Comes of Age: Conflicts or Cooperation with the Developing Countries?" (2000), 32 Case Western Reserve J. of Int'l L. 441.

¹¹⁹ See generally Gervais, *supra* note 8.

¹²⁰ To take two trademark-related examples, one could think of the wording of Article 6(1):

The conditions for the filing and registration of trademarks shall be determined in each country of the Union by its domestic legislation.

Or of Article 7bis:

The countries of the Union undertake to accept for filing and to protect collective marks [...]

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On the whole, however, while a country must provide protection of copyrights, certain related rights, trade marks, 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, there is considerable flexibility in how the rights and protected subject matter are defined¹²¹, owned¹²², managed¹²³, or indeed subject to exceptions¹²⁴. In the area of enforcement, the Agreement recognizes that the implementation in a given WTO member may be impacted by the availability of resources.¹²⁵ Another example is the delay in protecting pharmaceuticals by patents granted least-developed countries, *i.e.*, until 2016¹²⁶.

B. Intellectual Property as Part of an Economic Development Strategy

It is often said that developing economies need a different set of rules. As UNCTAD puts it:

...experience 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

(2) Each country shall be the judge of the particular conditions under which a collective mark shall be protected.

Article 9 and especially 9(6) could also be mentioned.

¹²¹ 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.

¹²² As was recognized by the Appellate Body in “United States – Section 211 Appropriation Act of 1998”, document WT/DS176/AB/R, at paras 215-221.

¹²³ For instance, rules as to the ownership of collective marks (see the previous Note) or whether and how copyright and related rights are to be managed (collectively or otherwise) are not explicitly mentioned in the Agreement.

¹²⁴ Many exceptions are only limited by the “three-step test” contained in TRIPS Articles 13, 26(2) and 30. See, Daniel Gervais, “Towards a New Core International Copyright Norm: The Reverse Three-Step Test” (2005) 9:1 *Marquette Intell. Prop. L. Rev.* 1-35.

¹²⁵ TRIPS Article 41(5). In addition, with respect to least-developed countries, the Preamble adds the following: Recognizing also the special needs of the least-developed country Members in respect of maximum flexibility in the domestic implementation of laws and regulations in order to enable them to create a sound and viable technological base.

UNCTAD published a detailed document on the flexibility of TRIPS. See supra note [113](#).

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¹²⁶ 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. Decision of the Council for TRIPS of 27 June 2002.

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.¹²⁷

Yet, as far as intellectual property 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 ended in January 2000 for the most part and in January 2005 for pharmaceutical patents¹²⁸. What I am suggesting, therefore, is that countries should not spend most of their energies to “fight” TRIPS. They can and should use its built-in normative elasticity to reconcile the new norms to the extent possible with their industrial, cultural, legal and economic parameters, based on their determination of priorities. However, the purpose should not be to try to circumvent TRIPS, because by and large it incorporates a rather well-honed set of norms establishing structures of protection¹²⁹ the impact, use and misuse of which have been extensively analyzed and commented upon in industrialized nations. Developing countries should assist in generating comparative research to identify ways in which those known intellectual property norms affect them differently and whether a different implementation method is required. Of course, developing countries are all different, which complicates the task, but perhaps parallels can be drawn based on, *e.g.*, geography or comparative levels of economic development. As has begun to emerge in countries such as China, local research and development efforts after years of FDI have transformed China as a major holder of domestically-developed intellectual property.

Developing countries should gain more by integrating TRIPS norms in a broader innovation and knowledge optimization strategy. As with market openness, intellectual property rules

¹²⁷ UNCTAD.¹²⁷ United Nations Conference on Trade and Development. Trade and Development Report, 2004, UNCTAD/TDR/2004at 96. (Geneva: UNCTAD, 2004) at 96..).

¹²⁸ TRIPS, Articles 65(2) and (4). In the case of pharmaceutical patents, least-developed countries now have until 2016. See *supra* note 126. See also Reichman, *supra* note 118.

¹²⁹ By which I mean copyright (and the bundle of rights it contains, together with exceptions and a long term of protection) for literary and artistic works; a twenty-year patent for new, useful and non-obvious inventions (to use North American terminology, reflected in the footnote to Article 27 in TRIPS), etc.

One could in theory devise a different system from scratch but the internationalization of any such new system would not be without very significant transition costs, and 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 Daniel Gervais, “The Internationalization of Intellectual Property: New Challenges from the Very Old and the Very New” (2002), 12:4 Fordham Intel. Prop., Media & Entertainment L. J. 929-990.

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per se are at best a catalyst. While part of that suggested strategy includes accepting TRIPS as a given and perhaps even as some argue as a common reference/defence point against TRIPS-plus demands made in bilateral discussions, it is also important to note that ¹³⁰TRIPS 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 law¹³¹, which may support efforts to develop alternative sets of public international law norms and/or to shift fora¹³². Developing and other countries can thus coalesce to develop alternative sets of norms¹³³ and the inclusion of TRIPS and WTO rules in the broader framework of public international law.

The suggested approach is not incompatible with the views of, *e.g.*, UNCTAD, which wrote in its 2004 Trade & Development Report¹³⁴:

...most of the evidence suggests that the impact of trade openness has been highly uneven, and contingent on a variety of institutional factors, and that there is room for discretionary policy measures at the micro and macro level.

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. This ties economic success to a heightened degree of economic interdependence through the mutually reinforcing interactions between expanding markets and an increasingly complex division of labour). Extending and deepening such interactions depends on new investments under conditions of objective uncertainty. To improve and expand existing capacity as well as to introduce new products and processes, a “profit-investment nexus” is needed that requires supporting financial arrangements, including accommodative monetary policy and relatively stable legal institutions.¹³⁵

And further:

¹³⁰ See generally Part IV of this book and Peter K. Yu, “Currents and Crosscurrents in the International Intellectual Property Regime”, (2004) 38 Loy. L.A. L. Rev. 323; and David Vivas-Eugui, “Regional and Bilateral Agreements and a TRIPS-Plus World: The Free Trade Agreement of the Americas”, (Geneva: Quaker United Nations Office, 2003), available at [http://www.geneva.quino.info/pdf/FTAA%20\(A4\).pdf](http://www.geneva.quino.info/pdf/FTAA%20(A4).pdf).

¹³¹ See “US – Standards for Reformulated and Conventional Gasoline”, Report of the Appellate Body, WTO Doc. WT/DS2/AB/R, at para.III. B

¹³² See Graeme B. Dinwoodie and Rochelle C. Dreyfuss, “TRIPS and the Dynamics of Intellectual Property Lawmaking” (2004), 36:1 Case W. Res. J. of Int’l L. 95, 120-1: “...developing 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 defense technique.”

¹³³ The recent example of the Brasilia summit between Arab and Latin American Nations comes to mind. The UNESCO draft Towards a Convention on the Protection of the Diversity of Cultural Contents and Artistic Expressions is also relevant, as would the Convention on Biological Diversity. See also Ruth Okediji, “The Institutions of Intellectual Property: New Trends in an Old Debate” (2004), 98 Am. Soc’y Int’l L. Proc. 219.

¹³⁴ UNCTAD, *supra* note 127.

¹³⁵ *Id.*, at 79.

...the openness agenda has perpetuated a lopsided view of the forces driving economic integration. It stresses the potential gains from participation in international markets while downplaying adjustment costs, and it stresses convergence tendencies while ignoring potential sources of cumulative divergence. As the previous sections have suggested, this approach has its limitations. 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.¹³⁶

True, importing intellectual property rules wholesale into the legislative and industrial fabric of a developing economy is insufficient for that country to succeed¹³⁷. However, it is fair to assume that a country's technology imports and inward FDI are unlikely to grow without intellectual property rules. We can conclude that (a) intellectual property rules are required but insufficient; (b) it is more pragmatic to accept TRIPS (which does not mean that efforts to develop alternative sets of norms are ill-founded); and (c) intellectual property rules must be properly calibrated as part of a broader domestic innovation and knowledge optimization strategy.

Except perhaps in specific areas such as traditional knowledge protection, it would be counterproductive to focus all efforts to the development of new and independent rules for at least two reasons. First, there is little if any evidence that a new form of intellectual property 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 policy flexibility needed by developing economies is partly there in TRIPS. More importantly, by developing a comprehensive strategy, a country can limit the negative impact of transitioning to higher intellectual property protection and increase its chances of reaping

¹³⁶ Id, at 95.

¹³⁷ That point was well articulated in the Report of the UK Commission on Intellectual Property Rights, *supra* note 76;

"...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." (Exec. Summary, at p. 5).

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the benefits thereof, including technology-related FDI and growing domestic Internet, pharmaceutical or other technology based industries.

C. Towards a National Strategy

The realization that intellectual property rules *per se* do not automatically lead to an increase in inward FDI, and that much more than a good book of IP rules is required to develop domestic innovation and creativity is what has prompted many developing countries to insist on the technology transfer part of the TRIPS bargain, which is enshrined in Article 66.2¹³⁸, as well as capacity-building under Article 67. This is linked to the quest for an intrinsic equilibrium, measured country-by-country (even in the face of uniform multilateral rules), in the way intellectual property protection is implemented¹³⁹.

Granted, the task at hand is not a simple one. Yet, instead of trying to turn back the clock of extant liberalization and intellectual property rules, I suggest that they can be put to good use. There is no room in this Article 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 are probably some of those that could be followed:

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 Strategy¹⁴⁰ should not be to obtain

¹³⁸ Which reads as follows:

"Developed country Members shall provide incentives to enterprises and institutions in their territories for the purpose of promoting and encouraging technology transfer to least-developed country Members in order to enable them to create a sound and viable technological base."

The Council for TRIPS is actively following the implementation of this provision, notably by requiring reports on technology transfer initiatives taken by developed countries. See the WTO Annual Report 2005, at 13 (available at http://www.wto.org/english/res_e/booksp_e/anrep_e/anrep05_e.pdf). See also WTO document IP/C/W/431 and addenda for a summary of the information provided.

¹³⁹ See supra note 50, and accompanying text.

¹⁴⁰ The Arab countries' proposal to WIPO on its Development Agenda (supra note 56, p. 6 of Annex) contained the following:

"As a first step, Member States should be encouraged to and assisted in setting up national strategies on intellectual property, which identify areas of strength and weakness in dealing with intellectual property systems.

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new imports, though they may be useful, but rather to build domestic intellectual property generating activities, in part through FDI (which almost always includes a knowledge and technology transfer component) and technology transfer and acquisition.

Education and Institutional Capacity Building

This is probably the most important aspect once priorities have been set. Education, both in the country and abroad, is the cornerstone of a viable, long-term knowledge strategy and economic growth in the information society. For example, a country should pay to send some of the best students to the top foreign universities, especially in field where the knowledge brought back can directly contribute to the Strategy in light of priorities set. This could include engineering, biology, chemistry, physics and all other sciences but also in almost all cases management & law (including intellectual property law!). Financial mechanisms may be used to ensure that trained graduates will return to their country of origin--if a country does not have patent protection, it will have a hard time attracting technology oriented employers and will have a hard time retaining nationals that have studied in this area¹⁴¹.

Training for policy makers, judges, high officials and other persons involved in economic development projects should similarly be organized. It cannot be stressed enough that successful education program outcomes will depend on selecting the best candidates for each program, and not base decisions solely or mainly on other factors.

Developing educational institutions and services is naturally very costly . Developing intellectual property institutions such as patent and trademark offices perhaps even more. Yet, developing countries can either delegate these roles to foreign institutions, a majority of which are located in the “First World”, thereby losing the 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, also because of their educational role with local businesses and research facilities.

Remedies should be found for weak areas and areas of strength should be further enhanced with a view to attaining a successful and efficient functioning of the intellectual property system.”

¹⁴¹ See Edmund W. Kitch, “*The Patent Policy of Developing Countries*” (1994), 13 UCLA Pac. Basin L. J. 166.

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Absent this kind of funding, another option, used in some parts of Africa for example¹⁴², is to build regional offices.

Subsidies

Within WTO and other applicable rules, there is room for subsidies in the form of tax breaks or otherwise. 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 given. By rewarding significant achievements at, e.g., an annual award ceremony successful innovators and creators are recompensed but a strong social signal is sent about the value of creation and innovation, which then functions as an additional incentive for others.

FDI “marketing”

FDI is not an economic panacea, but in the game of economic growth and development. It seems a better solution than a simple increase in imports. FDI generally comes with formal or informal knowledge and technology transfer and creates more and better local jobs than simple distributorships. Each country (and may be doing it aggressively already) 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.

Non IP- Regulatory Adaptation

Based on WTO and other rules and surveys, regulatory shortcomings should be addressed. Usually, an efficient legal system, investment protection rules, a competitive tax system and access to a qualified workforce will rate fairly high in the list of FDI preconditions.

Patent mining

¹⁴² See, e.g., the African Regional Industrial Property Organization, <http://www.aripo.wipo.net/index.html>.

Patent databases are publicly available. By mining recent patents and published applications¹⁴³ 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 the developing country in question, the technology cannot be used directly, but even a reasonable license cannot be obtained, the knowledge could be used, *e.g.*, for non-commercial research. As was noted by the UK Commission on Intellectual Property Rights¹⁴⁴, TRIPS allows (Articles 8 and 40) a WTO Member to determine an appropriate interface between intellectual property and competition law. However, many countries that implemented TRIPS recently did not and still do not have competition legislation.

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

Conclusion

Without adequate intellectual property protection, economic development will not happen, at least from a certain level--it is unclear whether intellectual property rules have any positive effect on the development of the truly poorer nations. In addition, we now know that while intellectual property is an essential ingredient, it does not an economic plan make. Many more elements are needed. This Article has argued that both for practical reasons and on the basis of available empirical data, TRIPS should be seen, indeed fully accepted as a given. It may also be defended as an appropriate reference point for developing nations in the context of TRIPS plus bilateral trade discussions¹⁴⁵.

TRIPS does contain a number of rules that WTO Members must implement, but it also affords a fair margin of “policy flexibility.” Implementing TRIPS 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.

¹⁴³ Which typically implies an 18-month delay after the initial filing. Unfortunately, in certain industries,,much can happen in 18 months.

¹⁴⁴ See supra note [76](#).

¹⁴⁵ See supra note [130](#).

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