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Is The Strict Global Protection of Intellectual Property Unfair for
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Summary

Will developing countries benefit economically from strengthening their protection of intellectual property? They have been repeatedly urged to do so by developed nations. But so far there is little empirical experience of either quite successful or failed examples. What we could hear from the media seems that the international protection of IPRs is getting stricter and more codified, while the situations that the developing countries face are being more tough. It is arguable that these global regulation trends are more a political competition or diplomatic fighting than a law discussion.

To answer the question that ‘Is the global IPRs protection fair or unfair for developing countries?’ I will divide the question in two aspects: (1) To what extent can developing countries influence the outcomes in the international intellectual property standard-establishing process? Namely, are they playing important or appropriate role in the international forum and legislation? And, (2) The relationship between the IPRs and development. Development, either domestic or international, is a complicated issue. The leaders, especially those from developing countries, are always trying to find the ways to solve the sustainable development problems. To what extent can IPRs international protection benefit the national/international development? How important that IPRS issues will be to influence the development strategy? Is stricter protection of IPRs or more flexible and soft protection better for developing countries?

If the developing countries join the international IPRs activities fairly, equally, and frequently, then in the first aspect we can say the global IPRs protection machine or mechanism is relatively fair. If the IPRs protection is fairly vital in the development process, and those weak protection in developing countries influence the worldwide economy and knowledge economy much, then we can conclude that IPRs is a key issue in development and stricter standard is necessary. However, what the real whole picture will be is open to discuss and explore. I will try to give a relatively complete analysis in these two issues.

Preface

I am deeply appreciated with my parents for all their love and patience during this study.

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Abbreviations

ACTPN:	US president Advisory Committee on Trade Policy and negotiations
ADR:	Alternative Dispute Resolutions
BC:	Berne Convention
BIRPI:	United International Bureaux for the Protection of Intellectual Property
CLEA:	The Collection of Laws for Electronic Access
DCs:	Developing Countries
EC:	European Communities
GATT:	General Agreement on Tariffs and Trade
GATS:	General Agreement on Trade in Services
ICANN:	Internet Cooperation for Assigned Names and Numbers
ICITO:	the Interim Commission for the International Trade Organization.
ITC:	International Trade Committee
IPRs:	Intellectual Property Rights
LDCs:	the Least Developed Countries
MFN:	Most Favoured Nations
PC:	Paris Convention
PLT:	Patent Law Treaty
PCT:	Patent cooperation Treaty
TRIPS:	Trade Related Aspects of Intellectual Property rights
UDRP:	the Uniform Domain name dispute Resolution Policy
UN:	United Nations
UNCTAD:	United Nations Conference on Trade and Development
WCT:	WIPO Copyright Treaty
WPPT:	WIPO Performances and Phonograms Treaty
WIPO:	World Intellectual Property Organization
WTO:	World Trade organization

1 Introduction

Lying at the heart of the question of whether the global protection of intellectual property rights is fair for developing countries (DCs), is another quite straight question. To what extent can developing countries influence outcomes in the international intellectual property standard-establishing process? This first part of the paper concludes that they have comparatively little influence. The main reason lies in the continued use of various of coercion by the US and EU, both of which remain united on the need for strong global standards of IPRs.

Does it matter if the capacity of DCs to influence the standard-making process remains weak? The question raises a complex set of normative and empirical questions about the role of IPRs in the development process. Since IPRs are but one micro-tool of national policy it is difficult to isolate their importance as a variable in development. If, as the World Bank has suggested, development is about expanding the ability of people “to shape their own futures” then we have a prima facie normative reason to be concerned about the loss of national sovereignty of developing countries over standards that impact on sectors such as agriculture, food, environment, health and education.¹

Intellectual property is a form of knowledge which societies have decided can be assigned specific property rights. (From the WIPO’s definition, intellectual property shall include the rights relating to: 1. literary, artistic and scientific works; 2. performances of performing artists, phonogram, and broadcasts; 3. inventions in all fields of human endeavor; 4. scientific discoveries; 5. industrial designs; 6. trademarks, services marks, and commercial names and designations; 7. protection against unfair competition) They have some resemblance to ownership rights over physical property or land. The basic contents of the intellectual property can be divided to: 1. industrial property (including patents, trademarks, industrial designs, integrated circuits and geographical indic) and 2. copyright. (including related rights or neighboring rights)

But knowledge is much more than intellectual property. Knowledge is embodied in people, in institutions and in new technologies in ways that have long been seen as a major engine of economic growth. With recent scientific and technical advances, particularly in biotechnology and information and communications technologies (ICTs), knowledge has become to an even greater degree than before the principal source of competitive advantage for both companies and countries. Trade in high technology goods and services which are knowledge-intensive, and where IP protection is most common, tends to be among the fastest-growing in international trade.²

In developed countries, there is good evidence that intellectual property is, and has been, important for the promotion of invention in some industrial

sectors, although the evidence as to exactly how important it is in different sectors is mixed. For example, evidence from the 1980s indicates that the pharmaceutical, chemical and petroleum industries were predominant in recognising that the patent system was essential to innovation.³ Today, one would need to add biotechnology and some components of information technology. Copyright has also proven essential for the music, film and publishing industries.

For developing countries, like the developed countries before them, the development of indigenous technological capacity has proved to be a key determinant of economic growth and poverty reduction. This capacity determines the extent to which these countries can assimilate and apply foreign technology. Many studies have concluded the most distinctive single factor determining the success of technology transfer is the early emergence of an indigenous technological capacity.⁴

The crucial issue is whether or not the extension of IP regimes assists developing countries in obtaining access to such technologies, and whether and how intellectual property right protection might help developing countries to achieve economic and social development and to reduce poverty. Therefor the following elements should be examined:

- The rationale for IP protection
- Its use historically in developed and developing nations
- The available evidence on the impact of IP on developing countries
- The role IP might have in facilitating the transfer of technology to developing countries.

2 The role that DCs play in the IPRs standard-establishing

The influence that developing countries do possess is contingent upon them being able to form coalitions with non-state actors, in particular the influential players within civil society. Some developed countries are arguably worse off than in the past. During the Cold War least-developed countries (LDCs) had the benefit of India and Brazil's leadership of a broad coalition of DCs, a coalition that mainly expressed itself in the form of the G77. The G77 has faded in importance. It is also not clear that India and Brazil are prepared to provide the general leadership on intellectual property issues they once did. In part this is because some Indians believe that India has something to gain from parts of the intellectual property regime such as copyright and geographical indications. This makes DCs have different plans themselves. Processes of modernization are fragmenting what was once a more unified bloc of countries. At the end of this part of paper I suggest some ways in which the influence of developing countries over the standard-making process can be improved. These recommendations proceed on the premise that the US and EU will make few concessions on intellectual property standards.

Regulatory globalization is a process in which different types of actors use various mechanisms to push for or against principles. Over time detailed rule-making follows the principles which have been established. So, for example, in the case of bilateral intellectual property negotiations in the 1980s the US (an actor) used the threat of the withdrawal of trading privileges in its market (the mechanism of coercion) to obtain the adoption of higher standards of intellectual property protection by DCs (the trumping of the principle of national sovereignty by the principles of national treatment and harmonization).

The US was not the only actor and coercion was not the only mechanism that explained the dynamic of intellectual property standard-making in the 1980s. For example, a number of corporations from the US, Europe and Japan claiming to represent the international business community released a document in 1989 that indicated strong support for a plurilateral agreement on intellectual property during the Uruguay Round (the mechanism of modelling). Australia supported the US position on TRIPS despite being a net intellectual property importer because it believed that by doing so it would achieve gains in the area of agriculture. This was an example of the mechanism of non-reciprocal coordination. Other principles relevant to understanding the evolution of intellectual property regimes include the principles of strategic trade, reciprocity, free flow of information, common heritage of mankind and world's best practice.⁵

2.1. Standard-Setting before TRIPS⁶

The international movement of intellectual property standards has been from developed to developing countries. It has largely been a spread from key western states with strong intellectual property exporting lobbies to DCs.

In most cases the transplant of intellectual property laws to developing countries has been the outcome of processes of empire-building and colonisation. For example, in parts of pre-independent Malaysia it was the English copyright law that applied. When in 1911 the United Kingdom enacted the Copyright Act of 1911 its operation was extended to include 'his Majesty's dominions'. In the case of pre-independent Malaysia the 1911 Act was restricted to the Straits Settlement. Later when British collecting societies began to worry about copying, representations were made to the Colonial Office and to the Board of Trade to have the Federated Malay States, North Borneo and Sarawak enact copyright law based on the 1911 Act.⁸ These states in the 1930s passed copyright laws based on the 1911 Act. Copyright policy was firmly in the grip of London, especially London publishers.⁷

Patent law in the Philippines also reveals the forces of empire at work. While the Philippines remained a Spanish colony, it was the Spanish patent law that applied. After December 1898 when the US took over the running of the Philippines, patent applications from the Philippines went to the US Patent and Trademark Office and were assessed under US law. Until 1947 when the Philippines created an independent patent system it largely followed US patent law, adopting, for example, the first-to-invent rule. In 1997 the Philippine Congress passed the Intellectual Property Code of the Philippines in order to comply with TRIPS.

The case of the Philippines illustrates that many developing countries for most of their history have never exercised a meaningful sovereignty over the setting of intellectual property standards. The direction of Korean patent law was affected by military conflict. In 1910 the Japanese replaced Korean patent law with their own. In 1946 the Republic of Korea acquired another patent law as a consequence of US military administration. In the 1980s the Republic of Korea was amongst the first to have its intellectual property laws targeted by the US under US trade laws. India had a patent law before many European countries, having acquired one in 1856 while under British colonial rule.

Colonialism had a profound impact on the expansion of copyright. Four major colonial powers ratified the Berne Convention for the Protection of Literary and Artistic Works (Berne Convention) in 1887, the year in which it came into force: France, Germany, Spain and the UK. Under Article 19 of the Berne Act for the Convention these states had the right to accede to the Convention "at any time for their Colonies or foreign possessions". Each of these colonial powers took advantage of Article 19 to

include their territories, colonies and protectorates in their accession to the Convention⁸. More and more colonies were drawn into the Berne system, especially after another two colonial powers, the Netherlands and Portugal, joined it in 1914.

The Berne system was deemed as to suit the interests of copyright exporters. Each successive revision of the Berne brought with it a higher set of copyright standards. By the time many countries shed their colonial status, they were confronted by a Berne system that was run by an Old World club of former colonial powers to suit their economic interests. Former colonial powers continued to watch over their former colonies. When eleven Sub-Saharan states joined Berne they were “so totally dependent economically and culturally upon France (and Belgium) and so inexperienced in copyright matters that their adherence was, in effect, politically dictated by the ‘mother country’ during the aftermath of reaching independence”.⁹

After World War II many developing countries became independent states. Some of them began to review the operation of the intellectual property systems that had been left to them by their colonisers. So, for example, after India’s independence two expert committees conducted a review of the Indian patent system. They concluded that the Indian patent system had failed “to stimulate inventions among Indians and to encourage the development and exploitation of new inventions”.¹⁰ Interestingly, India did not choose to abandon patent law as a tool of regulatory policy, but instead to redesign it to suit her own national circumstances - a country with a low R&D base, with a large population of poor people and having some of the highest drug prices in the world. Passed in 1970 India’s new patent law followed the German system of allowing the patenting of methods or processes that led to drugs, but not allowing the patenting of the drugs themselves. Patent protection for pharmaceuticals was only granted for seven years as opposed to 14 years for other inventions. This law became the foundation stone for a highly successful Indian generics industry.

India was not the only country that began to reform its patent law. During the 1970s Brazil, Argentina, Mexico and the Andean Pact countries all passed laws that saw patent rights in the pharmaceutical area weakened. Developing country generic manufacturers also became a threat to the western pharmaceutical cartels that had dominated the international pharmaceutical industry. Mexico’s entry into the manufacture of steroids in the 1960s, for example, contributed to the end of the European cartel that had dominated production until then.¹¹

Developing countries, in adjusting their intellectual property laws to suit their national interests, were only doing what they had observed developed countries doing. So, for example, fearing the might of the German chemical industry the UK changed its patent law in 1919 to prevent the patentability of chemical compounds. A study undertaken by the World Intellectual Property Organisation (WIPO) in 1988 for the negotiating group

that was dealing with TRIPS in the Uruguay Trade Round revealed that of the 98 members of the Paris Convention for the Protection of Industrial Property (Paris Convention), 49 excluded pharmaceutical products from protection, 45 excluded animal varieties, 44 excluded methods of treatment, 44 excluded plant varieties, 42 excluded biological processes for producing animal or plant varieties, 35 excluded food products, 32 excluded computer programs and 22 excluded chemical products.¹² These numbers include developed as well as developing countries. They also show the Paris Convention did not stand in the way of states adopting quite different standards of industrial property protection. Additionally they reveal that TRIPS principles do not reflect a harmonisation that had already occurred at the national level.

During the 1960s and 1970s DCs began to ask questions about the international standards of intellectual property that had emerged in previous decades, particularly in relation to the two main conventions, the Paris Convention and the Berne Convention. The theme of these questions was always the same. Were the international standards tilted too far towards the appropriation of knowledge rather than its diffusion? DCs sought adjustments to both the international copyright regime and the international patent regime. In both cases they were unsuccessful. Their attempts to adjust copyright rules to meet their needs in mass education precipitated a crisis in international copyright in the 1960s.¹³ Similarly, the attempts to revise the Paris Convention broke down. The fiercest debates took place over the revision of compulsory licensing of patented technology.¹⁴ For the US, developing country proposals for exclusive compulsory licensing amounted to little more than expropriation of US intellectual property rights. The revision of the Paris Convention that had begun in 1980 was never completed. In the eyes of key industry players like Pfizer, WIPO had failed to secure the higher patent standards that the large pharmaceuticals players wanted. Even more dangerously, countries like India, Brazil, Argentina and Mexico had shown that developing countries could lower standards of patent protection and still have a thriving generics industry. In the words of Lou Clemente, Pfizer's General Counsel, "[o]ur experience with WIPO was the last straw in our attempt to operate by persuasion."¹⁵

The disappointments of the 1970s in intellectual property standard-making led the US in the 1980s to adopt a strategy of forum-shifting. In fora such as WIPO, UNCTAD and UNESCO, the US faced the problem that developing country blocs could defeat its proposals on intellectual property or advance their own. The US began to argue the issue of intellectual property protection should become the subject of a multilateral trade negotiation within the General Agreement on Tariffs and Trade (GATT). The GATT was a forum in which the US was the single most influential player. Largely due to the efforts of the US and the US big business community the Ministerial Declaration, which in 1986 launched the Uruguay Trade Round, listed the trade-related aspects of intellectual property rights as a subject for negotiation.¹⁶

2.2 The TRIPS Negotiations

TRIPS, arguably, was an agreement that was produced as a result of bargaining amongst sovereign and equal states all having the capacity to conclude treaties and which agreed to TRIPS as part of a larger package of trade-offs in which there were gains for all. This line of defence becomes stronger if one can show that some form of democratic bargaining did take place amongst states on TRIPS. Conversely, if TRIPS does not meet the minimum conditions of democratic bargaining this raises questions about its efficiency, as well as its legitimacy. The theory of democratic bargaining argues that efficiently defined property rights are more likely to emerge if at least three conditions are met.¹⁷ Firstly, all relevant interests have to be represented in the negotiating process (the condition of representation). Secondly, all those involved in the negotiation must have full information about the consequences of various possible outcomes (the condition of full information). Thirdly, one party must not coerce the others (the condition of non-domination).

The first condition of democratic bargaining requires that DCs interests were represented at the TRIPS negotiations. On the face of it this condition seems to have been met. Not all developing states participated in the TRIPS negotiations, but key developing country leaders on intellectual property, most notably India and Brazil, did send negotiators. Lying behind representation in democratic bargaining is the idea that the representatives have some continuity of voice in the process. In other words, exclusion must not be practised. Here the track record of the GATT was not very good from a developing country perspective. This was one of the reasons why the US had chosen it as a forum for intellectual property. In the Tokyo Round, the EEC, US, Japan, Switzerland, NZ, Canada, the Nordic Countries and Austria on 13 July 1978 released a 'Framework of Understanding' setting out what they believed to be the principal elements of a deal. DCs reacted angrily pointing out that they had been left out of a process that was laying the foundations for a final agreement. The then Director-General of the GATT Oliver Long in his report recognised the problem of exclusion, but defended this behaviour as a practical necessity¹⁸. The deeper problem with this process was that it involved a strategy in which a non-representational inner circle of consensus was expanded to create larger circles until the goals of those in the inner circle had been met.

The TRIPS negotiations saw the use of circles of consensus reach new heights. GATT negotiations had developed a traditional pattern, known as the "Green Room" process:

In the 'Green Room' process, negotiators from all engaged countries face each other across the table (traditionally in the Green Room on the main floor of the WTO Building) and negotiate. Drafts are exchanged and

progress is noted as differences are narrowed and brackets are removed in successive drafts.¹⁹

This Green Room process had, in the case of TRIPS, been profoundly shaped by the consensus-building exercise that the private sector had undertaken outside of the Green Room. The European Commission was brought around to the US view on the importance of securing a code on intellectual property. The Quad states (US, EC, Japan and Canada) were all enrolled in support of the US business agenda, as were their business communities. Then there were the meetings of the Friends of Intellectual Property Group in places like Washington where the US circulated draft texts of a possible agreement. After the negotiations on the detail of TRIPS began in 1990 and especially after the breakdown of the Uruguay Round talks in Brussels over agriculture in 1991 further groups were created within the TRIPS negotiations to move the process towards a final deal, most notably the “10+10” Group which consisted of a mix of developed and developing countries. As the TRIPS negotiations descended into higher levels of informality the “10+10” was contracted or expanded to “3+3” or “5+5” or a group of 25 depending on the issue. It was in these informal groupings that much of the real negotiating was done and where the consensus and agreement that mattered was obtained. A list of these groups in roughly their order of importance would be:

1. US and Europe
2. US, Europe, Japan
3. US, Europe, Japan, Canada (Quad)
4. Quad ‘plus’ (membership depended on issue, but Switzerland and Australia were regulars in this group)
5. Friends of Intellectual Property (a larger group that included the Quad, Australia, and Switzerland)
6. 10+10 (and the variants thereof such as 5+5, 3+3) The US and the European Community were always part of any such group if the issue was important. Other active members were Japan, Nordics, Canada, Argentina, Australia, Brazil, Hong Kong, India, Malaysia, Switzerland and Thailand.)
7. Developing country groups (for example, the Andean Group - Bolivia, Colombia, Peru and Venezuela; Argentina, Brazil, Chile, China, Colombia, Cuba, Egypt, Nigeria, Peru, Tanzania and Uruguay combined to submit a developing countries draft text in 1990)
8. Group 11 (the entire TRIPS negotiating group - about 40 countries were active in this group)

It was the first three circles of consensus that really mattered in the TRIPS negotiations. Through the use of these circles of consensus the TRIPS process became one of hierarchical rather than democratic management. Those in the inner circle of groups knew what TRIPS had to contain. They worked on those in the outer circle until the agreement of all groups to a text had been obtained. TRIPS was much more the product of the first three groups than it was of the last six. LDCs were not a part of any of the groups that mattered.

The use of circles of consensus also makes it difficult to claim that the second condition of democratic bargaining, namely full information, was fulfilled. It can be seen from the list of groups that the US and Europe could move amongst all the key groups. This allowed them to soak up more information than anyone else about the overall negotiations. Whenever they needed higher levels of secrecy they could reform into a smaller negotiating globule. The claim that the TRIPS negotiations were a model of transparency is difficult to defend. In truth it was the transparency of a one-way mirror. This arrangement of groups also allowed the US and the EC the fluidity to build a consensus when and where it was required. For certain issues, such as how royalties from collective licensing were to be divided, they retreated to the bilaterals. Even though they were not able to always secure an agreement between themselves, their disagreement did not derail the TRIPS process itself.

It is also worth observing that all states were in ignorance about the likely effects of TRIPS in information markets. That there would be trade gains for the US was beyond doubt, but the real world costs of extending intellectual property rights and their effects on barriers to entry in markets were not at all clear. Multinationals had better information about the strategic use of intellectual property portfolios (since this was private information) in various markets around the world than did most governments.²⁰

It is the third condition of democratic bargaining, the absence of coercion, on which TRIPS lies most exposed. The US in its Trade and Tariff Act of 1984 had begun adapting section 301 of its 1974 Trade Act to its objectives on intellectual property, as well as linking its negotiating objectives on the protection of high technology to intellectual property trade barriers.²¹ (Section 301 is a national trade enforcement tool that allows the US to withdraw the benefits of trade agreements or impose duties on goods from foreign countries). In 1988 there were further significant changes to the US Trade Act of 1974 in the form of what came to be known as the 'Special 301' provisions. These require the USTR to identify foreign countries that deny adequate and effective protection of intellectual property rights or deny fair and equitable market access to US intellectual property holders.²² Also significant were the changes to the system of Generalized Special Preferences (GSP) that the 1984 Act had wrought. The President in deciding whether a developing country's products were to gain preferential treatment under the GSP system had to give 'great weight' to its protection

of foreign intellectual property rights.²³ For many developing countries gaining access to the closed and subsidised agricultural markets of developed countries was the main game. The whole point of the GSP system was to improve this access. At a meeting of the GATT Committee on Trade and Development in November 1985 some developing country representatives had suggested that the US was using its GSP system in a way that was “quite alien to the spirit and purpose of the generalized system of trade preferences in favour of developing countries”.²⁴ The European Community also enacted something similar to 301 in 1984 (the new commercial policy instrument – Council Regulation 264/84), but the Commission found it difficult to obtain consensus on its use. The Commission moved against Indonesia and Thailand for record piracy and suspended Korea’s GSP privileges for failing to provide satisfactory intellectual property protection.

When the US began to push for the inclusion of intellectual property in a new round of multilateral trade negotiations at the beginning of the 1980s, developing countries resisted the proposal. Their line of argument was that the GATT was primarily concerned with trade in goods and not personal rights of property in intangibles. Such rights fell within WIPO’s brief. The countries that were the most active in their opposition to the US agenda were India, Brazil, Argentina, Cuba, Egypt, Nicaragua, Nigeria, Peru, Tanzania and Yugoslavia.²⁵ After the Ministerial Declaration of 1986 these countries continued to argue for a narrow interpretation of the Ministerial mandate on the negotiation of intellectual property. Breaking the resistance of these ‘hard liners’ was fundamental to achieving the outcome that the US wanted. Special 301 was swung into action in the beginning of 1989. When the USTR announced the targets of Special 301, five of the ten developing countries that were members of the hard line group in the GATT that were opposing the US agenda found themselves listed for bilateral attention. Brazil and India, the two leaders, were placed in the more serious category of Priority Watch List, while Argentina, Egypt and Yugoslavia were put on the Watch List.²⁶ US bilateralism was not confined to these countries. By 1989 USTR fact sheets were reporting other successes: copyright agreements with Indonesia and Taiwan, Saudi Arabia’s adoption of a patent law and Colombia including computer software in its copyright law.

TRIPS was less a negotiation and more a “convergence of processes” in the words of a someone who was a US trade negotiator at the time. Opposition to the US GATT agenda was being diluted through the bilaterals. Each bilateral the US concluded with a developing country brought that country that much closer to TRIPS, “so that accepting TRIPS was no big deal” (1994 interview, US trade negotiator).

The negotiations on TRIPS are often said to have begun properly in the second half of 1989 when a number of countries made proposals, or the first part of 1990 when five draft texts of an agreement were submitted to the negotiating group.²⁷ A more sceptical view is that the negotiations were by then largely over. Developing countries had simply run out of alternatives

and options. If they did not negotiate multilaterally they would each have to face the US alone. In the GATT developing countries were not part of the circles of consensus that set the agendas. Furthermore, if they resisted the US multilaterally they could expect to be on the receiving end of a 301 action. This was anything but a veiled threat by the US. Its 1988 Trade Act made resisting the US in a multilateral forum part of the conditions that could lead to a country being identified as a Priority Foreign Country and therefore the subject of a Special 301 investigation.²⁸ There could be no clearer articulation of a threat than to enact it as law. At least if developing countries negotiated multilaterally there was the possibility that they would be able to obtain some limits on the use of 301 actions. This, at any rate, was what they were being told by developed country negotiators and the GATT Secretariat.

2.3 The Multilateralism in Intellectual Property Standard-Setting Post-TRIPS

During the Uruguay Round there were suggestions that if developing countries agreed to TRIPS the US would ease off negotiating intellectual property standards bilaterally. The following statement in 1989 from the Director for Intellectual Property at the Office of the United States Trade Representative (USTR) makes the point:

What happens if we fail [to obtain TRIPS]? I think there are a number of consequences to failure. First, will be an increase in bilateralism. For those of you who think bilateralism is a bad thing, a bad thing will come about.²⁹

It was always clear at all stages of the TRIPS negotiations that the principal players (US, EC and Japan) saw TRIPS as setting only minimum obligations. Nevertheless developing countries might reasonably have expected the World Trade Organization (WTO) or the World Intellectual Property Organization in some cases to become the principal fora for the negotiation of new intellectual property standards.

TRIPS was concluded as part of the text of Final Act of Uruguay Round negotiations (the Round was concluded on December 15 1993 and the Final Act signed on 15 April 1994) and came into operation on 1 January 1995. There has been no apparent decline in US bilateral activity on intellectual property since the signing of TRIPS. This is consistent with a broader trend identified by John Jackson in US trade policy in which the US has moved away from its earlier support for multilateralism and MFN (most-favoured-nation) to “a more ‘pragmatic’ – some might say ‘ad hoc’ approach – of dealing with trading partners on a bilateral basis and ‘rewarding friends’”.³⁰

2.4 Bilateralism in Intellectual Property Post-TRIPS

Many model bilateral agreements turned up. In bilateral trade negotiations between states involving a strong and weak state, generally speaking, the strong state comes along with a prepared draft text which acts as a starting point for the negotiations. Bilateral negotiations are complex and lengthy affairs, features which make them costly even for strong states. In order to lower the transaction costs of bilateralism the US has developed models or prototypes of the kind of bilateral treaties it wishes to have with other countries. Once a model treaty is ratified by the Senate, US trade negotiators know that if they stick to its terms in other negotiations there is a good chance the treaties flowing from these negotiations will also be approved. For the US there are very strong incentives for a standardization of bilateral treaty standards. So, for example, the bilateral investment treaty (BIT) which the US signed with Nicaragua in 1995 was based on the prototype that the US had developed for such treaties in 1994. Similarly the Free Trade Agreement (FTA) that the US has negotiated with Jordan will serve as a model for other FTAs being negotiated with Chile and Singapore.

2.5 The Global IP Movement

Bilateral intellectual property and investment agreements are part of a ratcheting process that is seeing intellectual property norms globalise at a remarkable rate. The two actors responsible for this process are the US and the EU. In short form this ratcheting process is dependent upon –

- (a) a process of forum shifting³¹ - a strategy in which the US and EU shift the standard-setting agenda from fora in which they are encountering difficulties to those fora where they are likely to succeed (eg from WIPO to the WTO to BIPs);
- (b) co-ordinated bilateral and multilateral IP strategies; and
- (c) the entrenchment in international agreements of a principle of minimum standards.

The principle of minimum standards plays a vital role in this strategy. Each bilateral or multilateral agreement dealing with intellectual property contains a provision to the effect that a party to such an agreement may implement more extensive protection than is required under the agreement or that the agreement does not derogate from other agreements providing

even more favourable treatment (See, for example, Article 1702 of NAFTA, Article 1.1 of TRIPS, Article 4.1 of the Jordan FTA and Article X1 of the Nicaraguan BIT). This means that each subsequent bilateral or multilateral agreement can establish a higher standard.

Bilateral agreements are also being drafted in ways to ensure that developing countries are integrated into multilateral IP regimes with maximum speed. Developing countries are being obliged to comply with multilateral standards in conventions to which they are not a party, to ratify multilateral treaties or both. So, for example, the Jordan FTA requires Jordan to give effect to Articles 1 - 14 of the WIPO Copyright Treaty and to ratify UPOV (see Article 4.1 and 4.29 of the Jordan FTA).

The global movement for IP consists of waves of bilaterals (beginning in the 1980s) followed by occasional multilateral standard-setting (eg TRIPS, the WIPO Copyright Treaty). Each wave of bilaterals or multilateral treaty never derogates from existing standards and very often sets new ones.

For the time being at least there appears to be no end in sight to the use being made of this global IP movement. The current negotiations of the Free Trade Area of the Americas (FTAA) have produced a long draft text on intellectual property rights. The draft text is far from final form and contains a lot of bracketed text indicating that the relevant clause or phrase is the subject of negotiation. Robert Wiessman in a recent submission to the USTR has drawn attention to some of the TRIPS plus language contained in draft text relating to medicines and compulsory licensing.³² The Electronic Frontier Foundation has also argued that draft language in the FTAA exceeds even the standards to be found in the US Digital Copyright Millennium Act on anti-circumvention and should be opposed because of its impacts on free speech and scientific communication.³³

2.6 The Role of WIPO in the Global IP Step

The General Assembly of WIPO passed two resolutions, one in 1994 and the other in 1995, requiring the International Bureau of WIPO to provide assistance to WIPO members on TRIPS-related issues. In addition there is a cooperation agreement between WIPO and the WTO in which WIPO assumes obligations to provide legal-technical assistance to developing country WTO Members on TRIPS matters whether or not those countries are members of WIPO.³⁴ The two resolutions oblige the International Bureau to provide advice and legal/technical assistance on matters such as the compatibility of a country's national IP legislation with TRIPS.

Demand for services of the International Bureau by developing countries has been high. Consider the following figures:³⁵

- From 1996 to 2000, 214 draft laws on intellectual property were prepared by the International Bureau for 119 developing countries (including some regional organizations); and
- The International Bureau during the same period also commented on or drafted amending provisions for 235 draft laws received from 134 developing countries (including some regional organizations).

The work of the International Bureau extends well beyond the drafting of laws for developing countries. Other forms of assistance include the provision of workshops for developing country drafters on the drafting of IP legislation and many meetings/seminars/training courses held in Geneva or in developing countries.

The provision of draft laws and legal advice to developing countries carries with it a burden of moral responsibility. LDCs in particular do not have local experts to evaluate the suitability of model international laws to local economic, social and cultural conditions. LDCs often lack drafting expertise and are reliant upon outside legal drafters, who may be brought in from those western legal systems to which the LDC has historical links as consultants or on contract basis for a set period. The problem is especially acute in the case of intellectual property since there are very few people who possess both the specialised technical skills of legislative drafting, as well as expertise in intellectual property law. Various articles of TRIPS create drafting options for a country. For example, a country experiencing an AIDS crisis which has no sophisticated pharmaceutical R&D base would want to take full advantage of the exceptions from patentability in Article 27.3, especially those in Article 27.3(a) (allowing for the exclusion of therapeutic method patents ie the exclusion of new uses of old drugs).

It is also probably the case that some developing countries themselves come to WIPO seeking TRIPS plus laws. US bilateral pressure on IP, as this paper shows, has increased rather than decreased. One simple way to deal with this pressure is to enact TRIPS plus laws.

The WIPO standard-setting process in both copyright and patents goes through the same basic stages:³⁶

1. A working group of experts issues a report (convened by a Standing Committee);
2. The report is considered by the Standing Committee. The Committee is comprised of WIPO Member states from different country regions such as Africa, Asia Pacific and so on. There are usually five members from each region. The Committee cannot make binding decisions;

3. The Standing Committee formulates recommendations for consideration by the WIPO General Assembly;
4. A Diplomatic Conference is held.

As one travels from stages 1 to 4 the process of standard-setting becomes more representative. Paradoxically, there is probably progressively less opportunity to influence the standard-setting process than at the working group of experts stage. By the time of the Diplomatic Conference, the standards have obviously been drafted and WIPO itself will through the relevant Standing Committee have carried out a massive consensus-building exercise in order to ensure the success of the diplomatic conference. Obviously there is no guarantee of success at a diplomatic conference since an effective veto coalition may emerge (as it did in the case of the proposed database treaty).

Stage 1 is perhaps just as important a site of influence as the other stages since it is at this stage that the framing of many of the issues takes place. Generally, the working groups in Stage 1 have no or poor representation from developing countries and especially LDCs. From the interviews it emerged that the problem here was that developing countries lacked experts. Much, of course, depends on the kind of filters that are applied to determine the possession of expertise. The epistemic community that has been the main influence on intellectual property standard-setting has been dominated by those with legal knowledge. Generally, when WIPO searches for 'experts' it is looking for legal expertise. In a patent law standard-setting exercise, for example, it would not seek a non-legal expert in biodiversity or economic development, even though many developing countries would have such expertise and would certainly see it as relevant to such an exercise. At the point of a diplomatic conference WIPO does provide generous financial assistance for representatives from LDCs to attend, but generally these representatives, if they speak, speak for the record at such an event.

2.7 Developing Country Efforts at IP Standard-Setting

Some economists have argued that countries ought to be able to have IPR standards that line up with their comparative advantage.³⁷ Developing countries have over the last 40 years persistently argued for international rules that facilitate the transfer of technology and give them some control over the conduct of multinationals. The trend, however, has been in the opposite direction. By way of illustration consider the following key events in the history of IP standard-setting:

- The attempts to modify the Berne Convention to take into account the educational and development needs of developing countries in the field of

copyright during the 1960s and 70s failed. The Stockholm Protocol never came into force and the Appendix to the Paris Act of Berne produced no real improvement in access to copyright materials.

- Since the copyright crisis the scope of copyright law and patent law has increased, most notably to include software (see, for example, Articles 10.1 and 27.1 of TRIPS) and the use of the Internet (see, for example, Articles 7 and 8 of the WIPO Copyright Treaty).
- Attempts by developing countries to change the compulsory licence provisions of the Paris Convention during the 1970s failed and the negotiations concerning the Convention came to an end during the 1980s. Patent law in the main patenting jurisdictions (US, Japan and European Union) has steadily expanded to meet the needs of large industry players concerned with the industrial application of biological science. The use of compulsory licences as a regulatory tool has become harder rather than easier.
- The work by UNCTAD on the Code of Conduct for the Transfer of Technology which had begun in 1976 came to a halt in the mid 1980s.
- Work on the UN Code of Conduct for Transnational Corporations which had begun in 1975 eventually ground to a halt in 1993.
- TRIPS commenced operating in 1996. It is an agreement which represents the successful completion of an international business agenda for the global strengthening of intellectual property law. TRIPS contains only modest concessions to the development needs of developing countries.
- Continued bilateralism by the US and EU in the 1990s is removing the flexibility that exists in TRIPS on matters such as compulsory licensing, scope of patentability and membership of international IP conventions.

The picture which emerges is one in which higher and higher standards of intellectual property protection are being globalised (as well as a trend towards using encryption technology to protect information) with little or no attempt to build into those standards transfer of technology objectives. In those cases where transfer of technology obligations are to be found in international conventions those obligations are framed in soft language and surrounded by provisions obliging members to respect intellectual property rights.³⁸ Developing countries are largely left to pursue their agendas within the interstices of an IP paradigm dominated by the US and EU. This was illustrated in the interviews at WIPO. When asked about developing country influence within WIPO, WIPO officials gave as examples the influence of Singapore in the preambular statement to the WIPO Copyright Treaty and the influence of developing countries on the issue of non-voluntary licences. The comparative triviality of these examples speaks volumes about the impact of developing countries within WIPO standard-setting exercises.

2.8 The Emerging Global Politics of TRIPS

During the TRIPS negotiations international NGOs and African states were not significant players. The two most striking features in terms of actors involved in the post-TRIPS scene has been the engagement of international NGOs in TRIPS issues and the leadership of the Africa group on health and biodiversity issues. The Organisation of African Unity (OAU), Ethiopia, Kenya, the Third World Network and the Institute for Sustainable Development have been prime movers in developing model legislation for African states which sets out regulatory principles for the ownership and use of biological resources and related local community knowledge. The model law initiative has informed the position of the African Group on intellectual property issues within the TRIPS Council and its accompanying review processes, as well as the Group's position in the negotiations on the International Undertaking. The special sessions of the TRIPS Council on the issue of intellectual property rights and access to medicines, the first of which was held in June of 2001, were inspired by a proposal from the African Group that was discussed and agreed to at a TRIP Council meeting in April of 2001.

There is little doubt that the rise in influence of the Africa Group has been enabled by a partnership with NGOs. Every single developing country negotiator interviewed for the purposes of this study commented on the positive role that NGOs have played in the debate over TRIPS and access to medicines (The role of the Quaker Geneva Secretariat came in for express mention. Another interviewee said "what negotiators like me failed to accomplish Oxfam and MSF have accomplished").

Western NGOs have broadly followed the reactive sequence of regulatory change. The death toll in Africa from AIDS has created one of the greatest international public health crises in history. By bringing details of this crisis before mass western publics NGOs have forced companies and governments to respond with initiatives, including a dialogue in the TRIPS Council concerning the impact of TRIPS on the sovereign capacity of states to pass public health measures to meet the crisis. Outside of the debates of the TRIPS Council an alliance between civil society and developing countries has seen a range of responses from the R&D-based pharmaceutical industry (including the dropping of the lawsuit against South Africa, voluntary drug donations, price drops in AIDS drugs), the involvement of other international organisations in the debate (eg the UN Commission on Human Rights), and policy proposals from key developed country actors (the tiered pricing option being advocated by the European Commission). In spite of these successes attempts by developing countries and NGOs to bring interpretative certainty to TRIPS standards on this issue by means of a Ministerial Declaration have met with resistance from a coalition of developed countries led by the US. Further, as has been pointed out in other sections of this report, US bilateralism on intellectual property standards is aimed at producing standards that are less flexible than those to be found in TRIPS. In similar fashion the alliance between food/seed NGOs and the

Africa Group in the WTO has so far not been successful using the review of Article 27(3)(b) to meet their goals of a prohibition on the patenting of living organisms and a recognition of a broader CBD reading of the sui generis option for plant variety protection. The lack of progress within the WTO on these issues has seen them included in a Declaration on the Fourth WTO Ministerial at Doha issued by the G77 and China.³⁹

Aside from the many hundreds of NGOs working on intellectual property issues as they arise in the food, agriculture, seed, health and biotechnology sectors and other NGOs work on intellectual property issues as they affect education, software programming, libraries, privacy and free speech. So, for example, the US academic community especially in the field of copyright has become one of the principal defenders of the public domain. Through their writing, pro bono litigation, amicus briefs, lobbying and the formation of the Digital Future Coalition, US academics in alliance with other groups such as librarians have fought the expansionist agendas of corporate intellectual property owners. Richard Stallman, the founder of the Free Software Foundation, has been a vital force in showing how a society can meet its needs for software on a non-proprietary basis.

The effectiveness of developing countries in the TRIPS Council has been a major factor in contributing to US bilateralism. Despite the US sending delegations of 10 to 12 to TRIPS Council meetings there is “lots of deadlock” and progress on the implementation of TRIPS has been slow. For the US the full benefits of TRIPS are tied to full implementation. Concluding bilateral agreements on IP with states like Chile that have “modern views” is seen by the US as a way forward.

2.9 Conclusion

A summary of international intellectual property standard-setting might be that it has been dominated by western states and intellectual property owners. Since World War II the dominant mechanism of standard-setting has become economic coercion, of which TRIPS is the most potent multilateral expression. Prior to TRIPS developing countries were essentially able to base some of their development strategies on free-riding strategies because they were either not members of international IP conventions or there was no mechanism of compliance. TRIPS makes the pursuit of free-riding strategies more difficult. Continued bilateralism by the US especially on intellectual property rights is further limiting the possibilities of such strategies. The principle of special and differential treatment for developing countries has in the context of intellectual property rights become symbolic rather than real. The extra ten years given to LDCs under TRIPS to enact and enforce fully functioning systems of copyright, patents and trademarks is not particularly generous, especially given that the development effects of doing so are anything but clear.⁴⁰

The reality of standard-setting for developing countries is that they operate within an intellectual property paradigm dominated by the US and EC and international business. Developing countries are encircled in the IP standard-setting process. TRIPS sets minimum standards. Bilaterally the bar on IP standards continues to be raised. When developing countries turn to WIPO for legislative assistance that assistance steers them down a TRIPS plus path. They are not in a position to mobilise webs of coercion and have to rely on webs of dialogue.

NGOs, after states and business, have become a third force in the global politics of intellectual property rights. NGOs function as an analytical resource for developing states and as possible partners in a global coalition of minority factions in international intellectual property standard-setting issues. But these kinds of coalitions are difficult to put together, are issue specific and predominantly rely on a crisis of some kind to be truly effective. They do not threaten the standard-setting dominance of the US and EU, especially when these two states are united on the direction in which global regulation should travel.

Given the track record of both the US and EU on intellectual property in the past developing countries can expect very few concessions on intellectual property issues in either a bilateral or multilateral context. Essentially developing countries will have to look to self-help on these issues and operate on the assumption that the global IP ratchet will continue to be worked by the US and EU in their economic interests and only minimal consideration being given to the development interests of developing countries.

2.10 Some Recommendations

1. Developing countries should use the Council for TRIPS to create a practice of asking states to explain bilateral departures from multilaterally agreed IP standards.
2. Developing countries should use the Trade Review Policy Mechanism to review distortions in trade being caused by excessively high intellectual property standards.
3. Trade policy bodies/institutes within developing countries should investigate the feasibility of forming a developing country Quad along the lines suggested in the paper.
4. An independent review of WIPO's current private sector income and development spending should be undertaken with a view to assessing the possibility of WIPO playing a role in the UN Programme Of Action For The Least Developed Countries For The Decade 2001-2010.

5. (i) Developing countries should review their participation in the WIPO standard-setting process with a view to increasing their participation in the expert groups and broadening the range of experts they send to WIPO meetings to include, for example, experts in health, environment and agriculture. (ii) Developed countries could assist by funding aid projects aimed at establishing structures for cooperation amongst ministries/regulators which have expertise to contribute on development aspects of intellectual property issues within a given developing country.
6. Developed countries should review the operation of the policy advisory committees that advise their patent offices with a view to significantly increasing the participation of members of civil society in those committees.

Developed countries should assess their conduct of trade negotiations with developing countries with a view to ensuring that development objectives remain a priority during those negotiations.

3 Intellectual Property and Development

What can we learn from the economic and empirical evidence about the impact of IP in developing countries? Does the historical experience of developed countries hold any lessons for developing countries today? How can technology transfer to developing countries be facilitated?

In developed countries, there is good evidence that intellectual property is, and has been, important for the promotion of invention in some industrial sectors, although the evidence as to exactly how important it is in different sectors is mixed. For example, evidence from the 1980s indicates that the pharmaceutical, chemical and petroleum industries were predominant in recognising that the patent system was essential to innovation. Today, one would need to add biotechnology and some components of information technology. Copyright has also proven essential for the music, film and publishing industries.

For developing countries, like the developed countries before them, the development of indigenous technological capacity has proved to be a key determinant of economic growth and poverty reduction. This capacity determines the extent to which these countries can assimilate and apply foreign technology. Many studies have concluded the most distinctive single factor determining the success of technology transfer is the early emergence of an indigenous technological capacity.

But developing countries vary widely in the quality and capacity of their scientific and technical infrastructures. A commonly used indicator of technological capability is the extent of patenting activity in the US and through international applications through the Patent Cooperation Treaty (PCT).⁴¹ In 2001, less than 1% of US patents were granted to applicants from developing countries, nearly 60% of which were from seven of the more technologically advanced developing countries.⁴² In the PCT, developing countries accounted for under 2% of applications in 1999-2001, with over 95% of these applications coming from just five countries: China, India, South Africa, Brazil and Mexico.⁴³ In these countries patent applications, although small, are growing faster than PCT applications generally. PCT applications grew by nearly 23% between 1999 and 2001, but the share of these countries in the total increased from 1% in 1999 to 2.6% in 2001. As we have seen R&D expenditure is heavily concentrated in developed countries, and in a few of the more technologically advanced developing countries. Few developing countries have been able to develop a strong indigenous technological capability. This means that it is difficult either for them to develop their own technology, or to assimilate technology from developed countries.

The crucial question is whether or not the extension of IP regimes assists developing countries in obtaining access to such technologies, and whether and how intellectual property right protection might help developing countries to achieve economic and social development and to reduce poverty. Therefore the following issues should be examined:

- The rationale for IP protection
 - Its use historically in developed and developing nations
 - The available evidence on the impact of IP on developing countries
- The role IP might have in facilitating the transfer of technology to developing countries.

3.1 The Rationale for IP Protection

Intellectual property creates a legal means to appropriate knowledge. A characteristic of knowledge is that one person's use does not diminish another's (for example, reading this report). Moreover the extra cost of extending use to another person is often very low or nil (for example, lending a book or copying an electronic file). From the point of view of society, the more people who use knowledge the better because each user gains something from it at low or no cost, and society is in some sense better off. Economists therefore say that knowledge has the character of a non-rival public good.⁴⁴

The other aspect of knowledge, or products embodying knowledge, is the difficulty - often intrinsic - of preventing others from using or copying it. Many products, incorporating new knowledge, can be easily copied. Probably most products, with sufficient effort, can be copied at a fraction (albeit not necessarily small) of the cost it took to invent and market them. Economists refer to this latter characteristic as contributing to market failure. If a product takes considerable effort, ingenuity and research, but can be copied easily, there is unlikely to be a sufficient financial incentive from society's point of view to devote resources to invention.

3.1.1 Patents

Patents are one way of addressing this market failure. By conferring temporary market exclusivities, patents allow producers to recoup the costs of investment in R&D and reap a profit, in return for making publicly available the knowledge on which the invention is based. However, someone else can only put that knowledge to potential commercial use with

the authorisation of the patentee. The costs of investment in R&D and the return on that investment are met by charging the consumer a price based on the ability to exclude competition.

Protection is therefore a bargain struck by society on the premise that, in its absence, there would be insufficient invention and innovation. The assumption is that in the longer run, consumers will be better off, in spite of the higher costs conferred by monopoly pricing, because the short term losses to consumers are more than offset by the value to them of the new inventions created through additional R&D. Economists take the view that the patent system improves dynamic efficiency (by stimulating technical progress) at the cost of static efficiency (arising from the costs associated with monopoly).

This rationale for patent protection is relatively straightforward, but it is dependent on a number of simplifying assumptions that may not be borne out in practice. For instance, the optimal degree of patent protection cannot be accurately defined. If protection is too weak, then the development of technology may be inhibited through insufficient incentives for R&D. If too much protection is conferred, consumers may not benefit, even in the long run, and patentees may generate profits far in excess of the overall costs of R&D. Moreover, further innovation based on the protected technology may be stifled because, for instance, the length of the patent term is too long or the scope of the protection granted is too broad.

The length of the monopoly granted is one determinant of the strength of patent protection. Another is the scope of the patent. A broad patent is one that allows a right that goes considerably beyond the claimed invention itself. For example, a patent which claims a gene might only specify one use of that gene. But, under certain approaches to the scope of protection, the patentee will also have the rights to uses of the genetic information other than those disclosed in the patent, including those discovered later by someone else. Broad patents can tend to discourage subsequent innovation by other researchers in the general area of the patent. In contrast, narrow claims will encourage others to 'work around' the patent, offering less restriction on related research by others. They may also tend to create stronger rights which are less vulnerable to challenge in the courts. The licensing policy pursued by the patentee will also have an important effect on the dissemination of new technologies, and the extent to which further research is affected by the granted rights.

The optimal degree of protection (where the social benefits are judged to exceed the social costs) will also vary widely by product and sector and will be linked to variations in demand, market structures, R&D costs and the nature of the innovative process. In practice IPR regimes cannot be tailored so precisely and therefore the level of protection afforded in practice is necessarily a compromise. Striking the wrong compromise - whether too much or too little - may be costly to society, especially in the longer term.

One underlying assumption is that there is a latent supply of innovative capacity in the private sector waiting to be unleashed by the grant of the protection that the IP system provides. That may be so in countries where there is substantial research capacity. But in most developing countries local innovation systems (at least of the kind established in developed countries) are weak. Even where such systems are stronger, there is often more capacity in the public than the private sectors.⁴⁵ Thus, in such contexts, the dynamic benefit from IP protection is uncertain. The patent system may provide an incentive but there may be limited local capacity to make use of it. Even when technologies are developed, firms in developing countries can seldom bear the costs of acquisition and maintenance of rights and, above all, of litigation if disputes arise.

Economists are also now very aware of what they call *transactions costs*. Establishing the infrastructure of an IPR regime, and mechanisms for the enforcement of IP rights, is costly both to governments, and private stakeholders. In developing countries, where human and financial resources are scarce, and legal systems not well developed, the opportunity costs of operating the system effectively are high. Those costs include the costs of scrutinising the validity of claims to patent rights (both at the application stage and in the courts) and adjudicating upon actions for infringement. Considerable costs are generated by the inherent uncertainties of litigation. These costs too need to be weighed against the benefits arising from the IP system.

Thus the value of the patent system needs to be assessed in a balanced way, acknowledging that it has both costs and benefits, and that the balance of costs and benefits is likely to differ markedly in diverse circumstances.

Amongst academics, notably economists, IPRs have generally been viewed critically. Such rights necessarily involve restrictions on competition which may be to the detriment of consumers and the freedom of trade, and the question is whether these costs are outweighed by the incentives for research and invention.

The quotations below reflect well the ambivalence that is widely expressed about the effects of the IP system in developed countries, and its impact on developing countries. This ambivalence has tended to strengthen as the IP system has embraced new technologies.

Edith Penrose in “The Economics of the International Patent System” in 1951:

“Any country must lose if it grants monopoly privileges in the domestic market which neither improve nor cheapen the goods available, develop its own productive capacity nor obtain for its producers at least equivalent privileges in other markets. No amount of talk about the “economic unity of the world” can hide the fact that some countries with little export trade in industrial goods and few, if any, inventions for sale have nothing to gain

from granting patents on inventions worked and patented abroad except the avoidance of unpleasant foreign retaliation in other directions. In this category are agricultural countries and countries striving to industrialise but exporting primarily raw materials...whatever advantages may exist for these countries...they do not include advantages related to their own economic gain from granting or obtaining patents on invention.”⁴⁶

A prominent academic lawyer, Larry Lessig, said of the US in 1999:

“No doubt we are better off with a patent system than without one. Lots of research and invention wouldn't occur without the government's protection. But just because some protection is good, more isn't necessarily better...There is growing skepticism among academics about whether such state-imposed monopolies help a rapidly evolving market such as the Internet...The question economists are now asking is whether expanded patent protection will do any good. Certainly it will make some people very rich, but that's different from improving a market...Rather than unbounded protection, our tradition teaches balance and the dangers inherent in overly strong intellectual property regimes. But balance in IP seems over for now. A feeding frenzy has taken its place - not just in the field of patents, but in IP generally...”⁴⁷

And Jeffrey Sachs, an eminent economist, said in 2002:

“...there is an opportunity to re-think the intellectual property rights regime of the world trading system vis-à-vis the world's poorest countries. In the Uruguay Round negotiation, the international pharmaceutical industry pushed very hard for a universal coverage of patent protection without considering the implications for the poorest countries. There is little doubt that the new IPR arrangements can make it more difficult for consumers in the poorest countries to access key technologies, as we've seen vividly in the case of essential medicines. The countries negotiating the new Doha round have already committed to re-examining the IPR issue in light of public health priorities, and they are wise to do so. It also may well be the case that the tightening of IPRs may slow the diffusion of technology to the world's poorest countries that has traditionally come through copying and reverse engineering. Those hallowed pathways of technological diffusion are increasingly being slowed, and the effects on the poorest countries may be unduly hindered. This is an area for close observation, policy attention, and continuing research.”⁴⁸

3.1.2 Copyright

The rationale for copyright protection is not dissimilar to that of patents, although historically greater weight has been given to the inherent rights of creative artists to receive fair remuneration for their works than to

the incentive effects. Copyright protects the form in which ideas are expressed, not the ideas themselves. Copyright was and remains the basis for making the publishing of literary and artistic works an economic proposition by preventing copying. Unlike patents, copyright protection does not require registration or other formalities (although this was not always the case).

As with patents, the trade-off for society is between the incentive offered to creators of literary and artistic works and the restrictions this places on the free flow of protected works. But, unlike patents, copyright in principle protects the expression of ideas, and not the ideas as such, which may be used by others. And it only prevents the copying of that expression, not independent derivation. The central issue for developing countries concerns the cost of access to physical or digital embodiments of the protected works, and the approach taken to enforcement of copyright protection.

As with patents, there are normally exceptions in law where the rights of owners are moderated in the wider public interest, known in some countries as “fair use” provisions (for example in the US), as “fair dealing” in the UK tradition, and exceptions to the reproduction right in the European tradition.¹ It is the issue concerning the cost of access, and the interpretation of “fair use”, that is particularly critical for developing countries, made more so by the extension of copyright to electronic material, and to software.⁴⁹

Copyright protects works for much longer than patents but does not protect against independent derivation of the work in question. Under TRIPS copyright allows a minimum of fifty years after the death of the author, but most developed countries and several developing countries have increased this to 70 years or more. While the main reason for the extension of copyright has been pressure from the copyright industries (notably the film industry in the US), there is no clear economic rationale for copyright protection being so much longer than that for patents. Indeed, the rate of technical change has led in several industries to a shorter effective product life (for example, successive editions of software programmes) which point to longer copyright protection being redundant. The successive increases in the period of copyright protection have given rise to concern in some quarters. Recently the US Supreme Court has heard a case that challenged the 1998 Copyright Term Extension Act on the grounds that it violated the Constitution which specifies that protection must be for “limited Times”. In addition, it is asserted that an extension of protection granted for a work that already exists can have no incentive effect, and also violates the quid pro quo requirement in the Constitution that monopoly rights are provided in exchange for public benefits.⁵⁰

As with patents, a key issue for developing countries is whether the gains to be elicited from the incentives provided by copyright outweigh the increased costs associated with the restrictions on use that flow from

copyright. Although there are exceptions, such as India's film or software industry, most developing countries are net importers of copyrighted material, just as they are net importers of technologies. Since copyright does not need registration or other formalities, once a country has copyright laws in place, the impact of copyright is more ubiquitous than in the case of patents. Software, textbooks, and academic journals are key items where copyright is a determining factor in pricing and access, and which are also essential ingredients in education and other spheres crucial to the development process. For instance, a reasonable selection of academic journals is far beyond the purchasing budgets of university libraries in most developing countries, and increasingly in developed countries as well.

The interaction of the Internet and copyright is an issue of particular and growing importance for developing countries. With printed media, there are provisions for "fair use" under copyright law, and the nature of the medium lends itself to multiple use either formally through libraries or informally through borrowing and browsing (as may be done in a bookshop before deciding to purchase). With material accessed through the Internet, the technology allows encryption and other means to exclude potential users even from browsing, unless they have paid the relevant charge. While the "philosophy" of the Internet has hitherto been about free access, increasingly sites with material of value are moving towards charging for use, or limiting access in other ways. Further, the DMCA in the US and Europe's Database Directive have provisions that go well beyond what is required under TRIPS, and are held by many users to have shifted the balance of protection too far in favour of investors and originators of collections of data.

Thus, as with patents, there is a need for balance. Too much protection by copyright, by other forms of IP protection, or by technology, may restrict the free flow of ideas on which the further progress of ideas and technology depends. For developing countries, affordable access to works essential for development such as educational materials and scientific and technical knowledge may be affected by unduly strong copyright rules.

3.2 Lessons of the past

There are several lessons that we can learn from history, particularly from the experience of the developed countries in the 19th century, and the emerging economies of East Asia in the last century.

First, historically IP regimes have been used by countries to further what they perceive as their own economic interests. Countries have changed their regimes at different stages of economic development as that perception (and their economic status) has changed. For instance between 1790 and 1836, as a net importer of technology, the US restricted the issue of patents to its own citizens and residents. Even in 1836, patents fees for

foreigners were fixed at ten times the rate for US citizens (and two thirds as much again if one was British!). Only in 1861 were foreigners treated on an (almost wholly) non-discriminatory basis. In his Annual Report for 1858, the US Commissioner of Patents noted:

“It is a fact, as significant as it is deplorable, that of the 10,359 inventions shown to have been made abroad during the last twelve months, but forty-two have been patented in the US. The exorbitant fees exacted of the foreigner, and the severity of the offensive discrimination established to his prejudice, afford a sufficient explanation of the result...it might well be concluded that the government of this country regarded an invention made beyond the seas as something intrinsically dangerous, if not noxious, the introduction of which it is morally just and politically wise to burden with taxation, just as you would thus burden the importation of some foreign poisonous drug. There is a loftier view of this question, and one deemed more in harmony with the progressive spirit of the age -- a view which hails the fruits of the inventive genius, in whatever clime matured, as the common property of the world, and gives them cordial welcome as the common blessings of the race to whose amelioration they are devoted.”⁵¹

Until 1891, US copyright protection was restricted to US citizens but various restrictions on foreign copyrights remained in force (for example, printing had to be on US typesets) which delayed US entry to the Berne Copyright Convention until as late as 1989, over 100 years after the UK. It is for this reason that some readers may remember purchasing books which had on the cover the words: “For copyright reasons this edition is not for sale in the U.S.A.”

Until the adoption of the Paris Convention (on protecting industrial property) in 1883, and its 1886 Berne counterpart (on literary and artistic works) countries’ ability to tailor the nature of their regimes to their own circumstances was unconstrained. Even then, the rules of these Conventions exhibited considerable flexibility. The Paris Convention allowed countries to exclude fields of technology from protection and to determine the length of protection afforded under patents. It also permitted revocation of patents, and compulsory licences to remedy abuses.

Secondly, numerous countries have at times exempted various kinds of invention in certain sectors of industry from patent protection. Often the law has restricted patents on products confining protection to processes for their production. Typically these sectors have been foodstuffs, pharmaceuticals and chemicals, based on the judgement that no monopoly should be granted over essential goods, and that there is more to be gained by encouraging free access to foreign technology, than by potentially stimulating invention in domestic industry. This approach was adopted by many countries which are now developed in the 19th Century, and for some until late in the 20th Century, and also in the East Asian countries (such as Taiwan and Korea) until relatively recently. However, TRIPS now forbids

discrimination in the grant of patent protection in respect of different fields of technology.

Thirdly, intellectual property, and patents in particular, have often been politically contentious. Between 1850 and 1875, a debate raged in Europe, both in academic and political circles, on whether the patent system was a blight on free trade principles or the best practical means of stimulating inventions. John Stuart Mill took the latter view:

“...an exclusive privilege, of temporary duration is preferable [as a means of stimulating invention]; because it leaves nothing to anyone’s discretion; because the reward conferred by it depends upon the invention’s being found useful, and the greater the usefulness, the greater the reward; and because it is paid by the very persons to whom the service is rendered, the consumers of the commodity.”⁵²

In essence, this remains the case for the system today – a relatively inexpensive way (at least for governments, in so far as they are not purchasers of the goods) to provide an incentive for invention with a reward proportionate to the use subsequently made of it.⁵³

Opposition to patent protection was advanced on various grounds but was summed up in the words of the Economist in 1851:

“The privileges granted to inventors by patent laws are prohibitions on other men, and the history of inventions accordingly teems with accounts of trifling improvements patented, that have put a stop, for a long period, to other similar and much greater improvements...The privileges have stifled more inventions than they have promoted...Every patent is a prohibition against improvements in a particular direction, except by the patentee, for a certain number of years; and, however, beneficial that may be to him who receives the privilege, the community cannot be benefited by it...On all inventors it is essentially a prohibition to exercise their faculties; and in proportion as they are more numerous than one, it is an impediment to the general advancement...”⁵⁴

Again, this clearly illustrates a theme that recurs in current discussions. If the system protects one set of inventions, can it avoid deterring those who seek to make improvements upon the first?

Foreshadowing the debates concerning TRIPS, the 19th Century argument was also related to the free trade controversy in that the patent system, by conferring monopolies, was seen by some as a contravention of free trade principles. Moreover there was self-interest at work. In Switzerland in the 1880s, industrialists did not want a patent law because they wished to continue to use the inventions of foreign competitors. This opposition was maintained in spite of the fact that the Swiss were enthusiastic patentees in other countries themselves. And because Switzerland had low tariffs, they feared that those competitors would take

out patents in Switzerland and then drive out Swiss competition under their protection.

Switzerland did eventually adopt a patent law, with various exclusions and safeguards, not because most Swiss thought there was any net benefit to be had from allowing foreign patents, but because Switzerland came under intense pressure, particularly from Germany, to do so and did not wish to invite retaliation from other countries.⁵⁵ Safeguards adopted included provisions for compulsory working⁵⁴ and compulsory licensing which enabled the government to enforce production in Switzerland by one means or another, if it so desired. In addition, chemicals and textile dyeing were excluded from patent protection. Elsewhere in Europe the proponents of the patent system also largely won the argument, just as the free trade movement waned in the face of the Great Depression in Europe. Only in Holland did the movement against patents wholly succeed, and from 1869 until 1912 no patents were issued there.⁵⁷

Fourthly, the best examples in the recent history of development are the countries in East Asia which used weak forms of IP protection tailored to their particular circumstances at that stage of their development. Throughout the critical phase of rapid growth in Taiwan and Korea between 1960 and 1980, during which their economies were transformed, both countries emphasised the importance of imitation and reverse engineering as an important element in developing their indigenous technological and innovative capacity. Korea adopted patent legislation in 1961, but the scope of patenting excluded foodstuffs, chemicals and pharmaceuticals. The patent term was only 12 years. It was only in the mid-1980s, particularly as a result of action by the US under Section 301 of its 1974 Trade Act, that patent laws were revised, although they did not yet reach the standards to be set under TRIPS. A similar process took place in Taiwan. In India, the weakening of IP protection in pharmaceuticals in its 1970 Patent Act⁵⁸ is widely considered to have been an important factor in the subsequent rapid growth of its pharmaceutical industry, as a producer and exporter of low cost generic medicines and bulk intermediates.⁵⁹

The general lesson history shows us is that countries have been able to adapt IPR regimes to facilitate technological learning and promote their own industrial policy objectives. Because policies in one country impinge on the interests of others, there has always been an international dimension to debates on IP. The Paris and Berne Conventions recognised this dimension, and the desirability of reciprocity, but allowed considerable flexibility in the design of IP regimes. With the advent of TRIPS, a large part of this flexibility has been removed. Countries can no longer follow the path adopted by Switzerland, Korea or Taiwan in their own development. The process of technological learning, and of progressing from imitation and reverse engineering to establishing a genuine indigenous innovative capacity, must now be done differently from in the past.

3.3 THE EXPERIENCE ABOUT THE IMPACT OF IP

Analysis of the available evidence on the impact of IPR regimes on developing, or developed countries, is a complex task. As noted above, we do not wish to focus on IPRs as an end in themselves, but on how they can contribute to development and the reduction of poverty. We believe that a prerequisite for sustainable development in any country is the development of an indigenous scientific and technological capacity. This is necessary to allow countries to develop their own process of technological innovation, and to enable them to absorb effectively technologies developed abroad. It is obvious that the development of such capacity is dependent on a large number of elements. It requires an effective education system, particularly at the tertiary level, and a network of supporting institutions and legal structures. It also requires the availability of financial resources, both public and private, to pursue technological development. There are many other factors that contribute to what are often known as “national systems of innovation”.

Viewed this way, the issue is whether IPRs can contribute to promoting effective national systems of innovation in principle and, given the wide existing variations in the indigenous scientific and technological capacity, how they can do so effectively in practice, taking account of the circumstances in particular countries. Moreover, since we are not just interested in the dynamic effect of IPRs in promoting innovation, but also the costs that IP protection imposes on society, particularly on poor people, we need to take account of these costs in considering the evidence and the value of any given IP system.

Much of the evidence about IPRs is either indirect or based on proxy measures. We cannot measure directly a country’s capacity for innovation (for example, we might commonly use R&D expenditures or innovations-related expenditures as a proxy). Nor can we directly measure the strength of patent protection in a country (although indices have been compiled using a mixture of proxies). The use of econometrics, which attempts to isolate the independent effect of IPRs on economic variables, is often contested, particularly as to whether it demonstrates association rather than causation. For instance, some authorities argue that the absence of IP protection encourages technology transfer and technological learning (through copying and imitation). Others argue that IP protection is a mechanism which encourages technology transfer from abroad through direct investment or licensing, and the indirect effects are an effective means of technological learning. Determining where the truth lies can be difficult for policymakers.

3.3.1 Redistributive Impact

Developing countries, taken as a whole, are net importers of technology, most of which is supplied by the developed countries. Organisations in developed countries own the overwhelming proportion of patent rights worldwide. Econometric models have been constructed to estimate what would be the global impact of applying the TRIPS agreement (i.e. globalising minimum standards for IP protection). The latest estimate, by the World Bank, suggests that most developed countries would be the major beneficiaries of TRIPS in terms of the enhanced value of their patents, with the benefit to the US estimated at an annual \$19 billion.⁶⁰ Developing countries, and a few developed ones, would be the net losers. The country sustaining the largest loss in the study by the World Bank was Korea (\$15 billion). Not too much should be read into the exact value of these figures, which depend on a number of debateable assumptions, but it can safely be said that the effect of applying patent rights globally will be to benefit very considerably the holders of patent rights, mainly in developed countries, at the expense of the users of protected technologies and goods in developing countries. Between 1991 and 2001, the net US surplus of royalties and fees (which mainly relate to IP transactions) increased from \$14 billion to over \$22 billion.⁶¹ In 1999, figures from the World Bank indicate a deficit for developing countries for which figures are available of \$7.5 billion on royalties and licence fees.⁶²

3.3.2 Growth and Innovation

That the extension of IPRs would tend to benefit the developed countries is not surprising and explains why pressure was applied by industry in developed countries for the adoption of TRIPS. But the calculations above only consider the cost side of the IPR equation for developing countries. If IPRs are to benefit developing countries that benefit will need to come through promoting invention and technological innovation, and thereby enhancing growth.

At the country level, there appears to be little economic research on developing countries that directly links the IPR regime to domestic innovation and development. An approach common to Germany, and the East Asian countries (including China), was the introduction of easily obtained utility models (or petty patents), which combined a lower standard of inventiveness, with registration rather than examination, and a shorter protection period.⁶³ When introduced in Germany, in 1891, these provided for three years of protection (renewable for a further three years) and by the 1930s, twice as many utility patents as examined patents were granted.⁶⁴ Studies of Japan's patent system in the period 1960-1993 have suggested that utility models were more important than patents in stimulating productivity growth.⁶⁵ There is also some evidence relating innovation in particular sectors in Brazil and the Philippines to the availability of such utility models.⁶⁶ In Japan, the evidence suggests that a system of "weak"

protection based on utility models and industrial designs facilitated incremental innovation by small enterprises, and the absorption and diffusion of technology. This was associated, as in Taiwan and Korea, with an absence of patent protection for chemical and pharmaceutical products. Japan introduced protection for the latter only in 1976.⁶⁷

There is more evidence about the impact of patent protection in developed countries. It appears to indicate that large firms consider patent protection of considerable importance in particular sectors (for example pharmaceuticals) but that in many sectors they are not considered important determinants of innovation.⁶⁸ Moreover, patents seem to be hardly used by small and medium enterprises in most sectors in many developed countries, as a means of promoting their innovation, or as a source of useful technical information. An important exception is the biopharmaceutical sector where companies often view their patent portfolios as their most important business asset.⁶⁹ A recent large study in the UK concluded that “formal IP regimes are applicable only to a small proportion of business activity, such as large manufacturing companies.” Other informal methods of protection, and of obtaining technical information, were generally more effective for SMEs.⁷⁰

The crucial question from our point of view is to what extent IPRs promote growth. The evidence we have reviewed does not suggest strong direct effects on economic growth in developing countries.⁷¹ One recent study found that the more open (to trade) an economy, the more likely it was that patent rights would affect growth. According to this calculation in an open economy, stronger patent rights might increase growth rates by 0.66% per annum.⁷² But there is some debate about causation because both openness to trade and the strength of the IPR regime tend to increase in any case with per capita income.

Other evidence suggests that the strength of patent protection increases with economic development, but that this does not occur until quite high levels of per capita income. Indeed, prior to the recent global strengthening of IP laws, there was a reasonably consistent observed relationship between the strength of IP rights and per capita income. At low levels of income, protection is quite high (reflecting past colonial influences) but then falls to a low point of weak protection at an income of about \$2000 (at 1985 prices) per capita. This low point is maintained until a per capita income of nearly \$8000 when the strength of protection begins to increase again. This association is not necessarily causal but it does indicate that until relatively high levels of per capita income, IPR protection is not a high priority in developing country policy.⁷³

Maybe the simplest evidence of the impact of the IP system is how much it is used, particularly by nationals. The propensity to take out patents will reflect some judgement as to the benefits, albeit private rather than social benefits. In sub-Saharan Africa in 1998 (excluding South Africa), 35 patents were granted to residents compared to 741 for non-residents. By

contrast in Korea, 35900 patents were issued to residents, compared to 16990 to non-residents. In the US, the corresponding figures were 80292 and 67228.⁷⁴

The main conclusion seems to be that for those developing countries that have acquired significant technological and innovative capabilities, there has generally been an association with “weak” rather than “strong” forms of IP protection in the formative period of their economic development. We conclude therefore that in most low income countries, with a weak scientific and technological infrastructure, IP protection at the levels mandated by TRIPS is not a significant determinant of growth. On the contrary, rapid growth is more often associated with weaker IP protection. In technologically advanced developing countries, there is some evidence that IP protection becomes important at a stage of development, but that stage is not until a country is well into the category of upper middle income developing countries.⁷⁵

3.3.3 Trade and Investment

Although the direct impact on growth is difficult to discern, much effort has been devoted to establishing the impact of changing IPR rights on trade and foreign investment. Much of it does not address the impact of IP rights on developing countries, but focuses instead on the question of how developed country exports and investment may be affected by strengthening IP rights in developing countries. These two approaches are not the same.

For instance, some studies show that stronger patent rights in developing countries would significantly increase imports from developed countries (or indeed other developing countries).⁷⁶ The argument is that some imports are a form of technology transfer (for example, high technology machinery imports have an independent impact on productivity). But strengthening IPRs is also particularly effective in increasing imports of low technology consumer items and is associated with the decline of indigenous industries based on imitation.⁷⁷ This effect is clearly a mixed blessing for a developing country. It may be that there is access to more high technology imports previously withheld for lack of IP protection but the costs may be very substantial in terms of lost output and employment, or even retarded growth. This issue is now a very real one in countries such as China. These studies also imply that countries with little technological capacity may experience reduced imports because the patent laws have the effect of increasing import prices on average, and hence reduce import capacity. Countries in the past have protected themselves against the possible adverse effects of increased imports on domestic industry through provisions relating to compulsory working of patents, as Switzerland did in the 19th century.

As regards the analyses of the impact on foreign investment, we have similar reservations. There is a considerable literature which discusses the extent to which stronger IPRs influence foreign investment, licensing behaviour and the transfer of technology. Much of this literature reaches only tentative conclusions, because of weaknesses in data or methodology.⁷⁸ Many of the studies pose the question, partly for reasons of data availability, in terms of how strengthening patents rights in developing countries will affect the investment, production and licensing behaviour of US multinationals in developing countries. For instance, one of the conclusions reached in a recent study, but it is typical of others working with similar datasets, is as follows:

“...these results suggest that if an average developing country were to strengthen its patent index by one unit, local sales of US affiliates would rise by...about 2% of average annual sales...a one-unit increase in the patent index of the average developing economy would raise the asset stock of US multinational affiliates by...about 16% of average asset stock.”⁷⁹

For policymakers in a developing country, the framework and questions might be rather different. He or she would want to know, if IPRs were strengthened, whether that would be likely to affect economic growth, employment, investment and R&D in the private sector, access to foreign technology, the domestic innovation process, and exports (as well as imports). There is a paucity of studies that directly address these issues of critical importance to policymakers in developing countries, let alone reach definitive conclusions on the impact of IPRs.

What is clear from the literature is that strong IP rights alone provide neither the necessary nor sufficient incentives for firms to invest in particular countries. If this was the case, then large countries with high growth rates but weak IPR regimes would not have received large foreign investment inflows in the past and even now. This includes many of the East Asian and Latin American economies which have received the bulk of such flows. If the question is addressed in terms of what factors are most important in determining foreign investment, it is quite common for IPRs to be omitted altogether. For instance, recent reports from international institutions and bodies on investment flows almost entirely fail to mention IPRs as a factor. These include, for instance, the World Bank's report on Global Development Finance 2002, and the Zedillo report on Financing for Development. Similarly, a recent draft World Bank report on improving India's investment climate makes no mention at all of the role of IPRs.

There is some evidence that for particular industries (such as chemicals) and for particular activities (such as R&D) IPRs may be a significant factor in the decision by firms to invest.⁸⁰ But the investment decision is contingent on many factors. For most low technology industries, of the kind that less technologically advanced developing countries are likely to attract, IPRs are unlikely to be a relevant factor in the investment decision. Where technologies are more sophisticated, but relatively easy to

copy, then IPRs may be – though not necessarily - a significant factor in investment decisions if a country has both the scientific capacity to copy and a sufficiently large market to justify the costs of patenting and enforcement and other relevant factors are favourable. In other cases, however, the introduction of IP protection has been associated, as noted above, with an increase in imports, rather than investment in local production. Finally, in high technology industries and for countries with sophisticated technological capabilities, technology owners may opt to license their technologies, protected by the IP regime, rather than invest directly in production. Thus strong rights may deter investment flows but facilitate technology transfer under licensing, which we return to in the next section.

It can be concluded from the existing studies that:

- There is some evidence that trade flows into developing countries are influenced by the strength of IP protection, particularly for those industries (often high technology) that are “IPR sensitive” (for example, chemicals and pharmaceuticals), but the evidence is far from clear.
- These flows may contribute to productive capability. But they may also be at the expense of domestic output and employment in local “copying” and other industries. Developing countries with no or weak technological infrastructure, may be adversely affected by the higher prices of importing IP protected goods.
- The evidence that foreign investment is positively associated with IP protection in most developing countries is lacking.
- For more technologically advanced developing countries, IPRs may be important to facilitate access to protected high technologies, by foreign investment or by licensing.
- Achieving the right balance may be difficult for some countries such as India or China where some industries have the potential to benefit from IP protection, but the associated costs for industries that were established under weak IP regimes as well as consumers are potentially high. Most of the evidence concerning the role of IP in trade and investment relates to those developing countries which are more technologically advanced. For other developing countries, we conclude that any beneficial trade and investment effects are unlikely to outweigh the costs at least in the short and medium term.

3.4 TECHNOLOGY TRANSFER

In a sense, the crucial issue in respect of IP is not whether it promotes trade or foreign investment, but how it helps or hinders developing countries to gain access to technologies that are required for their development. If a supplier of foreign technology licenses production to a domestic firm, rather than itself establishing manufacturing locally, less foreign investment will have been attracted. However, the overall result may be more beneficial to the domestic economy because of the indirect contribution to domestic technological capabilities. If high technology imports increase as a result of strengthening IP regimes, a transfer of technology may be achieved (for example, as embodied in capital goods), but there is no guarantee that the domestic economy will be capable of absorbing that technology as a basis for further innovation. Therefore the transfer of technology may not be sustainable. Rather, as we have seen, some countries may use weak IP regimes as a means of gaining access to foreign technologies and developing them using reverse engineering, thereby enhancing indigenous technological capacity. The implementation of TRIPS now restricts the ability of developing countries to follow this path.

But the determinants of effective technology transfer are many and various. The ability of countries to absorb knowledge from elsewhere and then make use and adapt it for their own purposes is also of crucial importance. This is a characteristic that depends on the development of local capacity through education, through R&D, and the development of appropriate institutions without which even technology transfer on the most advantageous terms is unlikely to succeed. The effective transfer of technology also often requires the transfer of “tacit” knowledge, which cannot be easily codified (for example, as in patent disclosures or instruction manuals). This is why even the best-designed programmes to foster national capacity for research which are funded by donors have not always been successful. Since many technologies of interest to developing countries are produced by organisations from developed countries, the acquisition of technology requires the ability to negotiate effectively based on an understanding of the particular area of technology. This process requires a determined approach on the part of the recipient of technology to acquire the necessary human capital and the appropriate institutions. Countries such as Korea started at a low level of technological expertise forty years ago, comparable to many low income countries today, but have now become innovators in their own right.

This aspect of the process of technology transfer is largely in the hands of developing countries themselves. But this does not mean that developed countries, or international policies more generally, cannot facilitate or hinder the process. The TRIPS agreement recognises in Article 7 that IPRs should contribute to the “transfer and dissemination of technology” but also, in Article 8, that measures may need to be taken to prevent the abuse of IPRs including practices that “adversely affect the international transfer of technology.” Article 40 includes provisions to prevent anti-competitive

practices in contractual licences. And Article 66.2 obliges developed countries to provide incentives to their enterprises and institutions to promote technology transfer to least developed countries (LDCs) in order to “enable them to create a sound and viable economic base”. These provisions in TRIPS reflect some of the provisions in the draft International Code of Conduct on Technology Transfer, on which negotiations between developed and developing countries failed in the 1980s.⁸¹

Since then, the global economy has changed. Notably, economic policies around the world have shifted from import substitution and directed industrialisation behind high tariff barriers towards open market policies which emphasise the benefits to be gained through low tariffs, global competition and a less directive role for governments in economic development. The so-called knowledge-based industries, and trade in high technology products, have grown apace. The importance of R&D has increased and product life cycles have shortened. In this liberalised and competitive environment, firms in developing countries can no longer compete on the basis of importing “mature” technologies from developed countries and producing them behind tariff barriers. Firms are more wary of transferring technology in ways that may increase the competition they face.

Thus the problem is not so much now about obtaining more or less mature technologies on fair and balanced terms, but of accessing the sophisticated technologies that are required to be competitive in today’s global economy. TRIPS has strengthened the global protection offered to suppliers of technology, but there is no international framework to ensure that the transfer of technology takes place within a competitive framework which minimises the restrictive technology licensing practices with which the Code was concerned.

It is uncertain as to how this gap in the international framework could best be filled. Recommencing discussions on a Code of Conduct is not a viable option in the changed environment. But we do think encouraging and assisting them to build their own competition law regimes could better serve the interests of developing countries. The development of a framework for international competition policy has been discussed for some time in the WTO. We understand the reluctance of developing countries to embark down this path, but the development of national competition laws and effective international cooperation could act as a counterbalance to the aspects of the TRIPS agreement which have the effect of restricting competition globally, and inhibiting technology transfer in certain circumstances.

As regards TRIPS, the evidence suggests that the provisions in Article 66.2 have been ineffective. Developed countries do not appear to have taken additional measures to encourage technology transfer by their firms and institutions. Moreover, the fact that the article applies only to LDCs seems unduly restrictive. As noted above, these are likely to be countries for the most part with the least absorptive capacity. We do not therefore

consider that Article 66.2 is the most appropriate way to address the entire issue of technology transfer to developing countries. Moreover some of the IPR provisions used historically to facilitate technology transfer, such as the use of compulsory working, have been significantly diluted under TRIPS. Since technology is mostly in private hands and TRIPS is principally concerned with the protection of IPRs, rather than technology transfer, we are unsure as to whether TRIPS, rather than the WTO more generally, is the right focus for a discussion on technology transfer.

Therefore the establishment of the Working Group on Trade and Technology Transfer is welcomed and it is suggested that this includes consideration of whether the TRIPS agreement could be made to work better as one mechanism to promote technology transfer, and what measures might be desirable to ensure that the IPR system promotes, and does not hinder, technology transfer. However, the range of complementary measures that will be required to promote technology transfer is equally important.

Although most applied technology is privately owned, it is important to remember the extent to which public spending on basic and applied research supports the process of technological development. Developed country public research spending now often has the explicit objective of enhancing international competitiveness and increasingly. Not only is research funding often tied to nationals, perhaps understandably, but also the benefits of such research may be restricted to nationals. For instance the law in the US restricts for the most part the licensing of publicly financed technologies to nationals, a policy for which the scientific and economic logic is less clear.⁸²

4 Conclusion

What are the influences that IPRs protection bring to DCs?

Some argue strongly that IPRs are necessary to stimulate economic growth which, in turn, contributes to poverty reduction. By stimulating invention and new technologies, they will increase agricultural or industrial production, promote domestic and foreign investment, facilitate technology transfer and improve the availability of medicines necessary to combat disease. They take the view that there is no reason why a system that works for developed countries could not do the same in developing countries.

Others argue equally vehemently the opposite. IP rights do little to stimulate invention in developing countries, because the necessary human and technical capacity may be absent. They are ineffective at stimulating research to benefit poor people because they will not be able to afford the products, even if developed. They limit the option of technological learning through imitation. They allow foreign firms to drive out domestic competition by obtaining patent protection and to service the market through imports, rather than domestic manufacture. Moreover, they increase the costs of essential medicines and agricultural inputs, affecting poor people and farmers particularly badly.

It can be concluded from the first part that the rules and practices of intellectual property, and how they evolve, are the product of political economy. Developing countries - and in particular poor consumers of products which may be protected by IP rights - negotiate from a position of relative weakness. There is a fundamental asymmetry in relationships between developed and developing countries, based ultimately on their relative economic strength.

The negotiations on TRIPS in the Uruguay Round are but one example. Developing countries accepted TRIPS not because at the time the adoption of intellectual property protection was high on their list of priorities, but partly because they thought the overall package offered, including the reduction of trade protectionism in developed countries, would be beneficial. Now many of them feel that the commitments made by developed countries to liberalise agriculture and textiles and reduce tariffs, have not been honoured, while they have to live with the burdens of the TRIPS agreement. The agreement on a new “development” WTO Round at Doha last year recognises that this bargain, between developed and developing countries, needs to be made explicit and meaningful.

The difficulty for developing countries in this context is that they are “second comers” in a world that has been shaped by the “first comers”. And because of that, it is a very different world from that in which the “first comers” developed. It is a cliché to say that we live in an age of globalisation, when the world economy is becoming more integrated. It is

an article of faith in the international community that integration on appropriate terms into the world economy is a necessary condition for development. The question from our point of view is what are the appropriate terms for that integration in the field of IPRs. Just as the now-developed countries moulded their IP regimes to suit their particular economic, social and technological circumstances, so developing countries should in principle now be able to do the same.

There is far more that needs to be thought about and done in considering the impact of the existing system upon developing countries. It is our contention that intellectual property systems may, if we are not careful, introduce distortions that are detrimental to the interests of developing countries. Very “high” standards of protection may be in the public interest in developed countries with highly sophisticated scientific and technological infrastructures (although we note, as above, that this is controversial in several respects), but this does not mean the same standards are appropriate in all developing countries. In fact we consider that developed countries should pay more attention to reconciling their own perceived commercial self-interest, with their own interest in the reduction of poverty in developing countries.

To achieve that end, so far as possible developing countries should not be deprived of the flexibility to design their IP systems that developed countries enjoyed in earlier stages of their own development, and higher IP standards should not be pressed on them without a serious and objective assessment of their development impact. It is necessary to ensure that the global IP systems evolve so that they may contribute to the development of developing countries, by stimulating innovation and technology transfer relevant to them, while also making available the products of technology at the most competitive prices possible. It is necessary to make sure that the IP system facilitates, rather than hinders, the application of the rapid advances in science and technology for the benefit of developing countries.

4.1 The Nature of Intellectual Property Rights

Some see IP rights principally as economic or commercial rights, and others as akin to political or human rights. The TRIPS agreement treats them in the former sense, while recognising the need to strike a balance between the rights of inventors and creators to protection, and the rights of users of technology (Article 7 of TRIPS). The Universal Declaration of Human Rights has a broader definition recognising “the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author”, balanced by “the right...to share in scientific advancement and its benefits”. The crucial issue is to reconcile the public interest in accessing new knowledge and the

products of new knowledge, with the public interest in stimulating invention and creation which produces the new knowledge and products on which material and cultural progress may depend.

4.2 How Should Intellectual Property Policy be Made?

When there is so much uncertainty and controversy about the global impact of IPRs, we believe it is incumbent on policy makers to consider the available evidence, imperfect as it may be, before further extending property rights in scope or territorial extent.

Too often the interests of the “producer” dominate in the evolution of IP policy, and that of the ultimate consumer is neither heard nor heeded. So policy tends to be determined more by the interests of the commercial users of the system, than by an impartial conception of the greater public good. In IPR discussions between developed and developing countries, a similar imbalance exists. The trade ministries of developed nations are mainly influenced by producer interests who see the benefit to them of stronger IP protection in their export markets, while the consumer nations, mainly the developing countries, are less able to identify and represent their own interests against those of the developed nations.

Whether IPRs are a good or bad thing, the developed world has come to an accommodation with them over a long period. Even if their disadvantages sometimes outweigh their advantages, by and large the developed world has the national economic strength and established legal mechanisms to overcome the problems so caused. Insofar as their benefits outweigh their disadvantages, the developed world has the wealth and infrastructure to take advantage of the opportunities provided. It is likely that neither of these holds true for developing and least developed countries.

In one word, critically access to this question that whether the IPRs global protection is fair to DCs, it is difficult to obtain a simple answer. Although it may be arbitrary to conclude that the developed countries do little help to DCs or even deprive them of the equal opportunities, at least, the current IP system is still far from satisfactory. The voice of DCs in the world forum is still weak, and their attendance in the dialogue, especially the North-South talking is still limited.

Therefore far more attention needs to be accorded to the needs of the developing countries in the making of international IP policy. Consistent with recent decisions of the international community at Doha and Monterrey, the development objectives need to be integrated into the making of IP rules and practice. At Monterrey in March 2002, governments welcomed “the decisions of the World Trade Organization to place the needs and interests

of developing countries at the heart of its work programme”. They also acknowledged the concerns of developing countries, including:

“the lack of recognition of intellectual property rights for the protection of traditional knowledge and folklore; the transfer of knowledge and technology; the implementation and interpretation of the Agreement on Trade-Related Aspects of Intellectual Property Rights in a manner supportive of public health...”

This is a satisfactory but partial agenda. There is far more that needs to be thought about and done in considering the impact of the existing system upon developing countries. Very “high” standards of protection may be in the public interest in developed countries with highly sophisticated scientific and technological infrastructures (although we note, as above, that this is controversial in several respects), but this does not mean the same standards are appropriate in all developing countries. In fact developed countries should pay more attention to reconciling their own perceived commercial self-interest, with their own interest in the reduction of poverty in developing countries.

To achieve that end, so far as possible developing countries should not be deprived of the flexibility to design their IP systems that developed countries enjoyed in earlier stages of their own development, and higher IP standards should not be pressed on them without a serious and objective assessment of their development impact. We need to ensure that the global IP systems evolve so that they may contribute to the development of developing countries, by stimulating innovation and technology transfer relevant to them, while also making available the products of technology at the most competitive prices possible. We need to make sure that the IP system facilitates, rather than hinders, the application of the rapid advances in science and technology for the benefit of developing countries.

Footnotes

1. World Bank, *The Quality of Growth*, OUP, NY, 2000, xxiii.
2. Maskus, K. (2000a) “*Intellectual Property Rights in the Global Economy*”, Institute for International Economics, Washington DC, pp.73-79.
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5. See J. Braithwaite and P. Drahos, *Global Business Regulation*, Cambridge, Cambridge University Press, 2000, Chapter 7.
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