

# Commission on Intellectual Property Rights

## Workshop 1: Technology, Development and Intellectual Property Rights

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**Summary:** The workshop focussed on the links between IP protection, economic development, and the development and acquisition of technology. Specifically, the following six sets of questions were addressed:

1. What role has intellectual property and its protection played in development at different stages of industrialisation? What lessons from the past that are relevant to today's developing countries?
2. How has the drive for greater international harmonisation of IPR standards affected development particularly in poorer countries?
3. What role does local innovation play in development and does IPR protection encourage local innovation? What economic and social costs has IPR protection produced that may be of particular concern to poor countries because of their stage of development?
4. Is there any evidence that IPR protection is the most efficient way of encouraging the creation of new knowledge **and** innovation? Are there alternative mechanisms that might be preferable as alternatives and complements?
5. Are there models of IPR protection specifically suitable to developing countries (e.g. utility models or petty patents; non exclusive rights for "minor" innovations). To what extent do other features of the legal and regulatory systems in place in countries at a given stage of development make specific kinds of IP protection more or less appropriate?
6. Does IPR protection facilitate foreign and/or domestic investment and innovation and technology transfer? If so, how important is IPR protection relevant to other factors influencing investment decisions and technology

transfer in poor countries? In which sectors is investment most sensitive to the level of IPR protection? Will increased harmonisation and standardisation of IPR protection reduce any impact that that IP has on foreign investment?

The Workshop concluded with a list of general comments and recommendations for the consideration of the Commission and national and international policy makers.

## **Session 1: Intellectual Property and Economic Development: Lessons from American and European Economic History**

### **Presentation by Zorina Khan**

Dr Khan's presentation traced the history of patents and copyrights in Europe and the United States as a means to convey a number of important points relevant to the workshop. With respect to the United States, she explained that the patent and copyright systems were inspired by democratic principles and the idea that the rights provided existed to enhance the development of the country. But the application of such principles produced different results. The patent system was extremely progressive, providing secure protection and accessibility to all sectors of society. It was also relatively non-discriminatory towards foreigners (though not at all times). The copyright system, on the other hand, was initially much less friendly to the interests of individual authors and artists, *especially if they were foreign*. In fact, the U.S. was notorious during much of the 19<sup>th</sup> century for the scale of intellectual piracy. In sum, the historical record demonstrates 'that appropriate policies towards intellectual property are not independent of the level of development nor of the overall institutional environment.'

The main policy implications were as follows:

- The economic history of Europe and America underlines the importance of *ensuring wide access* to intellectual property protection. A democratic intellectual property system is necessary to ensure that returns to individual investments in creativity accrue to society as a whole;
- It is important to encourage domestic innovation also *through effective mechanisms to disseminate information*.
- Policy makers need to set limits on *proprietors' rights of exclusion*;
- In designing pro-development IPR systems, policy makers must understand that patents and copyrights warrant very different treatment.
- Different levels of protection may be appropriate for *different sectors*, as part of a more general industrial policy;
- Changes in IPR rules must occur in tandem with development of the institutional environment including the legal and market systems;

- IPRs must be assessed within a broader policy context that includes trade and antitrust policies;
- Policy makers need to pay more attention to other means of appropriation such as data encryption, unfair competition laws, and private contracts. These may increase costs for proprietors but they lead to greater benefits in terms of social welfare.

## **Discussion**

The role of developing countries in the evolution of IP regulation has been very small. They have generally failed to devise original national IPR systems, and in consequence have tended to copy the IPR systems of developed countries. This lack of experience in creative IP policy making is disadvantageous since 'off-the-peg systems' are unlikely to address their specific needs.

To make matters worse, the public domain is being attacked by what may be referred to as 'the new enclosure movement'. This threatens the free exchange of scientific information, the continuation of which is vitally important for developing countries. The European Community's *sui generis* protection of databases was singled out as being especially problematic as it effectively provides perpetual and very strong rights, in addition to which, the EC is trying to export this model worldwide.

One way to reverse the trend would be to rely less on strong exclusive property rights and more on liability rules which operate on the principle of 'use now pay later' rather than exclusivity.

It was questioned how useful a historical overview is that misses out the finer details such as trends, for example, in patent breadth and in interpretations of key concepts like non-obviousness. While the U.S. patent system undoubtedly contributed to economic growth, its effects varied widely between different industrial sectors especially from the mid 19<sup>th</sup> century onwards. And while it was argued that the historical experiences of present day developed countries suggest that the TRIPS Agreement is detrimental for developing countries, applying lessons from the past to the modern globalised world should be done with caution.

## **Session 2: Intellectual Property Rights, Technology and Development: Experiences of Asian Countries**

### **Presentation by Dr Nagesh Kumar**

Dr Kumar's paper covered six topics: (i) patterns and trends in global innovative activity; (ii) a selective review of the evidence linking IPRs with economic and technological development; (iii) IPRs and economic and technological

development in East Asia; (iv) IPR change and technological capacity building within the Indian pharmaceuticals sector; (v) implications of TRIPS; and (vi) issues for national and international action.

Dr Kumar explained that in East Asia (Japan, South Korea and Taiwan), a combination of relatively weak IPR protection and the availability of second-tier IPRs like utility models and design patents encouraged technological learning. The weak IPRs helped by allowing for local absorption of foreign innovations. The second-tier systems encouraged minor adaptations and inventions by local firms. Later on, the IPR systems became stronger partly because local technological capacity was sufficiently advanced to generate a significant amount of innovation, and also as a result of international pressure.

The case of India has similarities to those of the East Asian countries studied, except that no second-tier protection was provided. This did not hurt the chemical or pharmaceutical industries, but may have hindered the development of innovative engineering industries.

Based on his findings, Kumar suggested some national and international-level policy responses.

At the national level developing countries should:

- Build adequate provisions for compulsory licensing in their IPR legislation in order to safeguard them from possible abuses of monopoly power;
- Incorporate provisions allowing researchers to use a patented invention for research purposes;
- Incorporate a 'bolar provision' in their patent laws allowing generic producers to use a patented drug for the specific purpose of seeking marketing approval. Such a provision helps ensure that as soon as the patent expires, generic drugs enter the market and the price of the drug falls;
- Allow parallel imports in order to force prices of certain goods down;
- Implement a competition regime to prevent the abuse of IPRs to unfairly restrict competition;
- Incorporate breeders' exemptions and farmers' privilege in plant variety protection legislation;
- Introduce price controls for essential drugs;
- Introduce utility models and industrial designs.

International level proposals:

- A moratorium on the further strengthening of IPRs;
- Granting developing countries additional flexibility in implementing TRIPS;
- Incorporating specific provisions on technology transfer;
- Increasing technical assistance and R&D funding to local enterprises in low-income countries to help them build local capacities. One suggestion is that

developed countries should donate a proportion of technology license fees collected from low-income countries to a fund to support inventive activities of domestic enterprises;

- Differential pricing of patented medicines to improve access for poorer countries.

## **Discussion**

The discussant noted the continuing uncertainties regarding the links between IPRs and technology transactions. He also drew the group's attention to the Working Group on Technology that the WTO members agreed in Doha to establish. He pointed out that all the actions proposed in Dr Kumar's paper are TRIPS-compatible but questioned whether the idea of creating a fund out of a share of licensing fees was feasible. He clarified also that the issue for developing countries to consider today is not whether to have IPRs or not to have them – they now recognise their valuable role – but how to design a system that meets their specific needs.

It was cautioned that measuring innovation levels by numbers of patents can be misleading. A great deal of innovative activity may not be protected by patents. (This view was reiterated by other participants). It was also suggested that in the United States at least, it is not the big corporations with their enormous patent portfolios that drive the economy but the smaller firms that in many cases do not rely heavily on the patent system. Many of them profit by reverse engineering and inventing around other companies' patents. Developing countries need to learn how these firms do this legitimately.

Another point that came up was that there is no need for developing countries to be given more flexibility allowing them to implement TRIPS as they see fit. The flexibility is there as long as they are allowed to use it. This view was not shared by all of the Workshop participants who felt that TRIPS does limit developing countries' room for manoeuvre.

## **Session 3: Policy Implications for Developing Countries: TRIPS and IPR Institutions and Practices**

### **Presentation by Jerome Reichman**

Professor Reichman referred to an earlier article of his<sup>1</sup> which offered a five-prong strategy for developing countries:

- Exploiting the flexibility of TRIPS in pursuit of national development goals

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<sup>1</sup> 'From free riders to fair followers: global competition under the TRIPS Agreement'. *New York University Journal of International Law and Politics* vol. 29, pp. 11-93, 1996-97.

- Using competition law to curb the abuse of market power
- Fashioning IPRs to stimulate local innovation
- Restricting the drive for stronger IP protection
- Strengthening national infrastructures for the acquisition and dissemination of scientific and technical knowledge

### *Exploiting the flexibility of TRIPS*

He explained that the main issue for developing countries is not that of compliance with TRIPS but of promoting their national systems of innovation (NSIs), which differ from one country to another. Developing countries need to improve their organisational and administrative capacity to identify what exactly their NSI needs are. They need to set up inter-ministerial coordinating committees operating at both national and regional levels and to work with civil society organisations. He warned against the WIPO Standing Committee on the Law of Patents initiative of drafting a Substantive Patent Law Treaty, which he considered as providing no benefits for developing countries since it would further limit their options.

### *Using competition law*

Professor Reichman suggested that competition law can be highly beneficial for developing countries. But if the WTO members commit to a competition agreement, they will need to improve their negotiating strategy or else they will end up with a harmful agreement. This means they must act in a coordinated fashion. Unfortunately developing country government ministries tend not to operate harmoniously and developed country negotiators are able to exploit this.

He also condemned the United States government's continuing pressure on developing countries to comply with TRIPS through its 'Special 301' trade law provision. This has a chilling effect on developing country use of the flexibilities of TRIPS. He argued that this behaviour is in breach of the required procedures as laid down by Article 23 of the Dispute Settlement Understanding<sup>2</sup> and that

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<sup>2</sup> See Article 23 (Strengthening of the Multilateral System), which states that:

'1. When Members seek the redress of a violation of obligations or other nullification or impairment of benefits under the covered agreements or an impediment to the attainment of any objective of the covered agreements, they shall have recourse to, and abide by, the rules and procedures of this Understanding.

2. In such cases, Members shall:

(a) not make a determination to the effect that a violation has occurred, that benefits have been nullified or impaired or that the attainment of any objective of the covered agreements has been impeded, except through recourse to dispute settlement in accordance with the rules and procedures of this Understanding, and shall make any such determination consistent with the findings contained in the panel or Appellate Body report adopted by the DSB or an arbitration award rendered under this Understanding;

(b) follow the procedures set forth in Article 21 to determine the reasonable period of time for the Member concerned to implement the recommendations and rulings; and

(c) follow the procedures set forth in Article 22 to determine the level of suspension of concessions or other obligations and obtain DSB authorization in accordance with those procedures before suspending concessions or other obligations under the covered agreements in response to the failure of the Member concerned to implement the recommendations and rulings within that reasonable period of time.'

developing countries should take advantage of this fact, such as by suspending their own obligations as permitted by the Vienna Convention on the Law of Treaties.<sup>3</sup>

### *Fashioning IPRs to stimulate local innovation*

Professor Reichman explored the possible uses of liability regimes for sub-patentable inventions along the lines of an article he published recently called 'Of green tulips and legal kudzu: repackaging rights in subpatentable innovation'.<sup>4</sup>

In many developing countries small-scale innovations are the most common type. Since these are likely to be unpatentable because of their cumulative nature, policy makers seeking to protect them through a property regime would have to lower the eligibility requirement or alternatively protect them through utility model or industrial design systems. Reichman proposes that instead of a property rights system that might well intrude on the public domain, raise barriers to entry, and hinder follow-on innovation, it would be better to introduce a liability regime that would guarantee a return on subpatentable innovations that are easy to copy. It would do this by requiring follow-on innovators to compensate initial innovators who would have the right to receive such compensation but not to exclude innovation by others.

Reichman explained that there are at least two reasons why utility models and industrial have become less suitable for developing countries than they were before. First, these systems have gradually become more proprietary over time. For example, the Italian utility model system was originally a weak one that simply gave first-movers a lead time advantage. Over time, the system provided stronger exclusive rights and now hinders follow-on innovation. Second, utility models have become subject to the TRIPS national treatment requirement following a recent WTO Appellate Body ruling. The proposed system would not be.

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<sup>3</sup> See Article 60 (Termination or suspension of the operation of a treaty as a consequence of its breach), which states that:

'2. A material breach of a multilateral treaty by one of the parties entitles:

(a) the other parties by unanimous agreement to suspend the operation of the treaty in whole or in part or to terminate it either:

(i) in the relations between themselves and the defaulting State, or (ii) as between all the parties;

(b) a party specially affected by the breach to invoke it as a ground for suspending the operation of the treaty in whole or in part in the relations between itself and the defaulting State;

(c) any party other than the defaulting State to invoke the breach as a ground for suspending the operation of the treaty in whole or in part with respect to itself if the treaty is of such a character that a material breach of its provisions by one party radically changes the position of every party with respect to the further performance of its obligations under the treaty.'

<sup>4</sup> In: R. Dreyfuss and D. Zimmerman (eds.) *Expanding the boundaries of intellectual property: innovation policy for the knowledge society*. Oxford University Press, 2001.

### *Restricting the drive for stronger IP protection*

Professor Reichman's view is that the TRIPS Agreement is flexible enough to accommodate the specific needs of each developing country WTO member. But strengthening the rights would not be in their interests. Consequently they should counter pressure to agree to such strengthened IPR protection.

### *Strengthening national infrastructures*

He explained that accessing scientific and technological information has never been easier than it is today. One of the biggest problems for developing countries is their lack of physical infrastructure for public sector research and technology transfer. Another 'dark cloud' on the horizon is the possible globalisation of the European Community's database protection model which is in the forefront of the 'new enclosure movement'.

### **Discussion**

The discussant felt the liability model presented by Professor Reichman had some positive aspects, especially the fact that it would reduce transaction costs for follow-on innovation. With respect to international negotiations, he suggested that developing countries should take advantage of the dispute settlement understanding to a much greater extent. With respect to negotiating capacity, he acknowledged the lack of expertise. During the discussion it was mentioned that the Quaker United Nations Office in Geneva, Oxfam and Medicines sans Frontieres were instrumental in producing the Doha Health Declaration. This highlights this lack of capacity problem.

It was also suggested, with some empirical evidence from Britain to support the view, that patents are generally not very important for small companies. The same may be true for companies in developing countries, most of which are also small, and therefore lack the resources to accumulate and assert large patent portfolios.

### **Session 4: Where should the Commission focus its recommendations?**

During the 1970s, the question of licensing was a key area of interest for policy makers. Nowadays, more internalised forms of technology transfer are more common such as through foreign direct investment. The issue cuts across several agreements, not only TRIPS, but also the General Agreement on Trade in Services, the Agreement on Technical Barriers to Trade, and multilateral environmental agreements like the Framework Convention on Climate Change and the Convention on Biological Diversity. Successful technology acquisition



and adoption requires appropriate skills and a conducive institutional environment.

The WTO Ministerial Conference has agreed to set up a Working Group to examine ‘the relationship between trade and transfer of technology, and of any possible recommendations on steps that might be taken within the mandate of the WTO to increase flows of technology to developing countries’. For the Working Group to make a useful contribution, it might consider undertaking work in four areas: (1) analytical work; (2) the relationship between trade and transfer of technology; (3) technical cooperation; and (4) consensus building.

One of the main historical measures to ensure technology transfer was to require patent-holders to work their invention. The restriction of this option in TRIPS is a loss for developing countries. To make matters worse, many companies do not want to share their technologies with competitors. Developing country firms often cannot compete if they can only use older technologies.

However, it was cautioned that compulsory licensing is not necessarily a panacea since acquiring the technologies can still be time-consuming and entail high transaction costs.

### **Key issues and recommendations for the Commission’s enquiry**

The following issues and recommendations for the Commission, and for policy makers more generally, were made by the participants.

#### **Key issues**

- History provides important lessons for present-day policy makers.
- Capitalising on the benefits of IP protection in developing countries requires a range of complementary changes to the environment for investment and risk taking. This implies reforming IP systems as part of forward-looking and sensibly formulated economic policy. But this places increased burdens on policy makers, and highlights the need for considerable technical assistance.
- Policy makers should adopt as broad a paradigm as possible in attempting to explain technological change and development of national innovation capabilities in countries. And when analysing the role of IPRs, they need to distinguish between the different roles played by each type of IPR (patents, copyright etc.) rather than lump them all together as “single IPRs”.

- Science and technology policy as well as IP policy have a key role to play in creating a conducive environment for innovation. But policy makers must be aware of the need also to consider what is feasible as well as what is desirable in the real world.
- Policy makers should not underestimate the task of improving the institutional infrastructure in developing countries so they can operate an effective IP regime. They need to pay particular attention to that fact that in spite of its importance, little has so far been done in this area.
- Policy makers should concentrate on technology and innovation capacity building in developing countries, bearing in mind how little invention and knowledge creation is actually patentable and how much takes place outside of the formal IP system and formal innovation system as operated by big companies. This is more important than just trying to figure out how developing countries can use the formal IP system better.
- Technology transfer is significantly affected by transfer of people between companies and countries. This is true because people can transfer technologies as effectively as can licensing agreements. In order to facilitate technology transfer of this kind, a commitment to training people in the art and knowledge of the patented invention could be made a condition for the granting of patents.
- Developing countries need flexibility to fine-tune their IP laws. It is not IP laws per se that are the problem for development but the drive towards full harmonisation across countries with very different levels of development. There is a need to preserve the autonomy of countries to calibrate their IP regimes within the parameters of TRIPS.

### **Recommendations for the Commission**

- The Commission should take into consideration the relationship between IPRs and the economic and technological development of both developed and developing countries in drawing up its final recommendations.
- The key message that one size does not fit all needs to be made loudly and clearly by the Commission. A possible solution could be to examine the concept of threshold levels of economic development as triggers for compliance with international IP standards. And insofar as harmonisation may be a reality for some time to come, policy makers need to find ways to compensate the net technology importers such as by returning a share of technology licensing fees paid to rich countries back to low-income countries.

- There is a need for better monitoring of the impacts of IPRs in different economic sectors in developing countries. The Commission should therefore recommend a standing international mechanism to review the impact on development of the increased protection (à la TRIPS) of IPRs worldwide in which all countries could participate formally (i.e. through one of the international organisations such as WTO, WIPO or elsewhere in the UN system).
- The Commission should bear in mind the benefits of markets and market-based solutions for economic and technological development in developing countries. At the same time, it should exercise caution in unreservedly recommending the use of state intervention into markets through instruments such as compulsory licenses.
- The Commission should indicate that public agencies have a key role to play in regulating technology transfer to developing countries, though not perhaps in the traditional sense of screening every licensing agreement.
- The Commission should call for studies on how innovation takes place in SMEs.
- Consideration should be given to investigation how to use competition law to create pro-competitive IP systems and encourage broad decentralised innovation systems. There is a need to better understand competition law and its relation to IP law. The Commission might consider recommending some analytical work in this area.
- The Commission should draw attention to the potential benefits of greater ODA investments in R&D in developing countries. Carefully done, such investments could be very productive in stimulating innovations and increasing access to them.
- The Commission should make clear that TRIPS is not a perfect instrument. It could be improved through the review process that is currently biased in favour of ever higher levels of protection ('strengthening' the system tending to be viewed as being synonymous with 'improving' it). In that context, there is a need to express particular caution about 'TRIPS plus' elements creeping into IP regimes in developing countries. Perhaps a "stand-still" should be recommended for a period.
- The Commission should recognise that new IP laws are hard to undo once they have been implemented. This is a tricky issue because it is hard to predict the effects of new IP laws, especially in new technologies like biotechnology. Developed countries need to be more sympathetic about

this and stop pushing for rapid and radical strengthening of IPRs in developing countries.

- The Commission and policy makers should consider ways to better operationalise TRIPS Art 7 and 8.
- The Commission should highlight the need for policy makers to understand that for most developing countries TRIPS envisages rapid changes in levels of IP protection over a very short time period. Stronger IP protection in the least-developed countries is unlikely to provide any positive contribution to development, at least in the short term. It is especially important to develop national IP systems in a pro-poor manner and not to believe that the US or European systems are necessarily the right models to be followed.
- The Commission should address the urgent need to find ways to extend to developing countries the kind of analytical and technical resources they will need to participate more effectively in the important IP-related rule making processes that will be happening in the near future (e.g. the new WTO negotiations and the various WIPO processes).
- It is important to know who advises developing countries on IP law reform. In this context the Commission should request answers to such questions as why the flexibilities in (for example) TRIPS are not being used as much as they might be. These questions should be carefully addressed to guide the future provision of technical assistance.