

TECHNOLOGY TRANSFER IN TRIPS AGREEMENT: IMPLICATIONS FOR DEVELOPING COUNTRIES

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I. Introduction

The controversial and divisive debate on transfer of technology, which acquired importance on the international economic agenda with the launching of the unsuccessful negotiations concerning a Draft Code of Conduct in the 1970s, remains a subject of continuing multilateral negotiations. Developing countries have expressed in various international forums their preoccupation about access to foreign technologies as a means of enhancing their technological capabilities and of narrowing the deep North- South gap in development levels. In response, developed countries argued during the Uruguay Round negotiations that strengthening and expanding the protection of intellectual property rights (IPRs) was a key condition to promote increased flows of technology transfer to developing countries. This argument has been repeatedly articulated by TRIPS enthusiasts and the industries that most benefit from the international rules set forth in the TRIPS Agreement. Developing countries, however, have become increasingly skeptical about the existence of a virtuous relationship between IPRs and technology transfer. This skepticism underpins the need to assess the implications to the developing countries of the TRIPS Agreement with reference to provisions of technology transfer. This article briefly explores some aspects of the TRIPS Agreement that are relevant to technology transfer and their implications to the developing countries. Although

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there are many aspects of domestic Intellectual property laws still subject to national discretion that may influence the extent of technology transfer and the power of third parties to gain access to foreign technologies, this article focuses on some international rules contained in the TRIPS Agreement.

II. Meaning of Technology Transfer

There is no consensus on the definition of technology transfer.² For the purpose of present study we accept technology transfer to mean *any process by which a party in one country gains access to the technology of another party in a second country and successfully learns how to absorb it into its production function.*³ Generally, this paper focuses on technology transfer from developed countries to developing or least-developed countries (LDCs), but technology transfer may occur between any two countries in any direction. Thus, technology transfer is a broad term though this Article will consider only a limited part of it.

2 There has been a general consensus that any workable definition of technology transfer must be functional rather than formal; however, the specific definitions have varied. One scholar *Harold Brooks* defined it as “the process by which science and technology are diffused throughout human activity.” *Kaynak* labeled it “the transmission of know-how to suit local conditions...” Nevertheless, both authors were careful to point out that the transfer of technology requires a functional component—in order for there to be a true transfer of technology, there must be effective absorption of the transferred technology by the recipient country. Another scholar *Eric W. Hayden* elaborated, “the important factor in defining technology transfer is that the recipient acquires the capability to manufacture itself a product whose quality is comparable to that manufactured by the technology supplier.” Thus there is no consensus on the definition of “technology transfer.” Although discussed in the United Nations for years, there has not yet been any formal agreement within that body. See David M. Haug, “The International Transfer of Technology: Lessons That East Europe Can Learn From The Failed Third World Experience” 5 *Harv. J.L. & Tech.* 209 (1992).

WIPO standing committee on the Law of Patents observes that the term “transfer of technology” may be understood in a narrow or broad sense when used in the context of intellectual property. Broadly stated, the transfer of technology is a series of processes for sharing ideas, knowledge, technology and skills with another individual or institution (e.g., a company, a university or a governmental body) and of acquisition by the other of such ideas, knowledge, technologies and skills. In the context of transferring technologies from the public sector and universities to the private sector, the term “transfer of technology” is sometimes used in a narrower sense: as a synonym to “technology commercialization” whereby basic scientific research outcomes from universities and public research institutions are applied to practical, commercial products for the market by private companies. See WIPO, *Standing Committee on the Law of Patents* (December 11 2009) SCP/14/4, available at: http://www.wipo.int/edocs/mdocs/scp/en/scp_14/scp_14_4.pdf (visited on 6 October, 2011).

3 Keith E. Maskus, “Encouraging International Technology Transfer” 9 (UNCTAD-ICSD Project on IPRs and Sustainable Development), Issue Paper No. 7, 2004. available at: http://www.iprsonline.org/unctadictsd/docs/CS_Maskus.pdf (visited on 12 September 2011).

Due to disparity in technological capacity among countries, technological knowledge generally flows from a higher technological capacity country to a lower technology capacity country in different forms and methods.⁴ These include foreign direct investment (FDI), licensing, joint ventures, turn-key packages, purchase of equipment, management contracts, government aid etc.⁵

III. Preamble of TRIPS Agreement

The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) reflects the contentious nature of the negotiations and the differences in perspective among the negotiating WTO Members. TRIPS is a new instrument on IPRs in international trade. It is the result of “new area” negotiations in the Uruguay Round.⁶

As far scope of Preamble is concerned, the statements contained in Preamble are not intended to be *operative* provisions in the sense of creating specific rights or obligations. A Preamble is designed to establish a definitive record of the intention or purpose of the parties in entering into the agreement.⁷ Article 31 of the Vienna Convention on the Law of Treaties⁸ provides that the Preamble forms part of the treaty text and, as such, part of the terms and “context” of the treaty for purposes of interpretation.⁹ Article 31 of the Vienna Convention on the Law of Treaties (1969) provides in relevant part:

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4. See WIPO, *Standing Committee on the Law of Patents* (December 11 2009) SCP/14/4, available at: http://www.wipo.int/edocs/mdocs/scp/en/scp_14/scp_14_4.pdf (visited on 6 October, 2011).
 5. See David M. Haug, “The International Transfer of Technology: Lessons That East Europe Can Learn From The Failed Third World Experience” 5 *Harv. J.L. & Tech.* 209 (1992).
 6. The other principle “new area” of negotiations concerned trade in services, resulting in the General Agreement on Trade in Services, or GATS. While trade-related investment measures (or TRIMS) also covered a “new area”, the resulting agreement in that area largely restated existing GATT 1947 rules.
 7. UNCTAD-ICTSD Project on IPRs and Sustainable Development, *Resource Book on TRIPS and Development 2* (Cambridge, New York, 2005).
 8. The Convention was adopted on 23 May 1969 and entered into force on 27 January 1980. Text: United Nations, *Treaty Series*, vol. 1155, p.331.
 9. Article 31 of the Vienna Convention on the Law of Treaties (1969) provides in relevant part:
 - “1. A treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose.
 2. The context for the purpose of the interpretation of a treaty shall comprise, in addition to the *text*, including its *preamble and annexes*.”

1. A treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given. As noted earlier, the Preamble of TRIPS may be used as a source for interpretation of the operative provisions of the agreement.¹⁰ Since the Preamble is not directed to establishing specific rights or obligations, it is difficult to predict the circumstances in which its provisions may be relied upon. Many or most TRIPS Articles leave some room for interpretation, and in this sense the Preamble may be relevant in many interpretative contexts for developing countries.¹¹

The potential importance of the Preamble to TRIPS is demonstrated by reference to the decision of the WTO Appellate Body (AB) in the Shrimp-Turtles case.¹² In this case, reference in the WTO Agreement to the objective of “sustainable development” fundamentally influenced the approach of the AB to interpretation of the GATT 1994.¹³ Because there is a wide variety of dispute that may arise under TRIPS, it is not practicable to predict the circumstances in which the Preamble may be employed as an interpretative source. What the Shrimp-Turtles case makes evident is that the potential role of the Preamble should not be discounted.¹⁴ The Preamble of TRIPS should be read in conjunction with the Preamble of the WTO Agreement that sets out the objectives to reduce barriers and discrimination in trade in order to promote economic development and improve standards of living, with attention to sustainable development, and with special attention to the needs of developing countries.¹⁵

IV. Objectives and Principles of TRIPS Agreement

Article 7 (Objectives) of TRIPS provides:

“The protection and enforcement of intellectual property rights should contribute to the promotion of technological innovation and to the transfer and dissemination of technology, to the mutual advantage of producers and users of

10. See supra note 7.

11. Id at 10.

12. WTO, United States: *Import Prohibition on Certain Shrimp and Shrimp Products- Report of the Appellate Body* (12 October 1998) WT/DS58/AB/R 1998-4.

13. See supra note 7 at 12.

14. Ibid.

15. Ibid.

technological knowledge and in a manner conducive to social and economic welfare, and to a balance of rights and obligations.”

The first three objectives—technological innovation, transfer and dissemination of technology, and the production and use of technological knowledge focus mainly on technological development.¹⁶ IPRs have been designed to benefit society by providing incentives to introduce new inventions and creations. In introducing IPR protection, countries should frame the applicable rules so as to promote technological innovation and the transfer and dissemination of technology “in a manner conducive to social and economic welfare”.¹⁷ The concept of “mutual advantage of producers and users of technological knowledge” is of particular importance in this context, since developing countries are largely *users* of technologies produced abroad.¹⁸ A number of developing countries have indicated that the implementation of Article 7 should be examined in the Council for TRIPS in the context of determining whether TRIPS is fulfilling the objective of contributing to the dissemination and transfer of technology.¹⁹

Article 8.1 (Principles) provides:

“Members may, in formulating or amending their laws and regulations, adopt measures necessary to protect public health and nutrition, and to promote the public interest in sectors of vital importance to their socio-economic and technological development, provided that such measures are consistent with the provisions of this Agreement.”

Article 8.1 provides the interpretative or normative principle of the TRIPS. The provision, together with Article 7, confirms the broad and unfettered discretion

16. Peter K. Yu, “A Tale of Two Development Agendas” 35 *Ohio N.U. L. Rev.* 465 (2009).

17. “Transfer” generally refers to the *transmission* of technology in a bilateral context (e.g. a licensing agreement), while “dissemination” rather alludes to the *diffusion* of innovation. IPRs normally reduce the diffusion of innovations as the title-holder charges prices above marginal costs in order to take advantage from the exclusive rights, he enjoys.

18. Interestingly, although TRIPS covers trademarks and copyrights, it only refers in Article 7 to “technological” knowledge.

19. While reference to reaffirming commitments under Article 66.2 was made in the Doha Declaration, this reference relates to encouraging actions by enterprises and institutions in favour of least developed Members.

that Members have to pursue public policy objectives.²⁰ Article 8.1 broadly recognizes Members' rights in formulating or amending their laws and regulations. It does not only refer to laws and regulations on IPRs but to measures adopted in other fields, for instance, those that restrict the manufacture or commercialization of IPR-protected goods. Issues concerning the application of Article 8.1 may, hence, arise in two contexts, one fully within the IPR realm, and another one outside it, but with implications on the protection of IPRs.²¹

Article 8.1 is important to third world because it provides justifications for special exceptions that promote the public interest in sectors of vital importance to socio-economic and technological development.²² Whether a particular act is "*in the public interest*" is probably not subject to any objective test. Each member state should be able to decide what constitutes these sectors based on their needs, goals, and interests.²³ Permissible actions may include measures excluding foreign direct investment in certain sectors, and the regulation of royalty rates and other conditions in licensing agreements.²⁴

With the rapid development experienced by economies such as India, Brazil, China and South Africa, the question what constitutes "sectors of vital importance" may assume new complexities. These economies have the distinctive characteristics of having wide internal divergences in their socio-economic conditions and technological capabilities. It is therefore difficult to determine what constitutes the relevant sectors in these countries.²⁵

Although Article 8.1 can no doubt be interpreted broadly to promote the development goals of third world, the provision contains two major constraints, both of which were added at the request of developed countries in the last stages of the negotiation. The use of the term "necessary," as opposed to the language "it considers necessary" would seem to indicate that the imposition of these measures

20. The fact that Article 8 only states a 'principle' rather than a specific rule mirrors the intention of the treaty-makers not to rule on the matter itself in any detailed form, but to leave Members broad discretion as regards its implementation.

21. See supra note 16.

22. Ibid.

23. Ibid.

24. Ibid.

25. bid.

are not within the absolute discretion of the invoking Member, but are instead subject to potential WTO review in regard to their validity.²⁶ Even worse, the provision requires the measures to be “*consistent with the provisions of this Agreement.*” This second constraint greatly erodes the pro-development aspect of Article 8.1.²⁷

Fortunately for third world, whether one fails the TRIPS-consistency requirement will depend on the overall interpretation of the TRIPS. When Articles 7 and 8 are read together, a careful and effective interpretation of Article 7 may help remove the potential inconsistency with the TRIPS. Also of great importance is a skillful use of the Preamble, which arguably can be viewed as a condensed expression of the underlying principles of the TRIPS. Consistency with the TRIPS should be assessed in the light of Article 7 and of the Preamble that is, taking the balance of rights and obligations and the social and economic welfare into account.²⁸ Certain measures for technological development may be inconsistent with some of the specific standards laid down in the TRIPS; it is their overall consistency with the agreement that should be taken into account.²⁹

Article 8.2 (Principles) provides:

“Appropriate measures, provided that they are consistent with the provisions of this Agreement, may be needed to prevent the abuse of intellectual property rights by right holders or the resort to practices which unreasonably restrain trade or adversely affect the international transfer of technology.”

This Article to a large extent reflects the view advanced by the Indian delegation,

26. Ibid.

27. Ibid.

28. Ibid.

29. Ibid.

30. Exploitation of Intellectual Property Rights (IPRs) could give rise to anticompetitive behaviour, whether by individual firms or by concerted practices or agreement among firms. In safeguarding the efficient functioning of the market, competition policy seeks to deal with situations where the promotion of competitiveness is undermined by other factors. There are, in this context, three types of conflicts that may arise between the pursuit of competitiveness and IPRs. First, intellectual property may be used contrary to the objectives and conditions of its protection, a situation called misuse. Second, market power resulting from intellectual property may be used to extend the protection beyond its purpose, such as to enhance, extend or abuse monopoly power. Third, agreements on the use or the exploitation of intellectual property may be concluded in restraint of trade or adversely affecting the transfer or the dissemination of technology or other knowledge, a situation called restrictive contracts or concerted practice. In order to prevent or control such conflicts and to distinguish pernicious practices from competition-enhancing ones, many countries have enacted anti-trust regulations or other competition

among others, during the Uruguay Round negotiations that one of the main objectives of TRIPS should be to provide mechanisms to restrain competitive abuses brought about by reliance on IPR protection.³⁰

Practices which adversely affect the international transfer of technology, must be understood broadly as well. *First*, practices adversely affecting international technology transfer must be distinguished from practices which restrain trade. This is so because they are named separately in Article 8.2,³¹ and because Article 7 of the Agreement singles out transfer of technology as one of the objectives of the Agreement. Thus practices which are not anti-competitive, but which do have an adverse effect on technology transfer, may be subject to specific national regulation.³² The consistency requirement³³ already provides the necessary safeguards against truly counter-productive regulation of technology transfer. *Second*, compared to Article 40,³⁴ which is ambiguously formulated in this respect, Article 8.2 clearly covers not only contractual practices affecting international transfer of technology,

legislation to respond to anti-competitive behaviour. The approaches taken depend on the particular conditions of national markets, national legal traditions, and on public interest considerations. Competition rules are not designed to curb the functioning of the intellectual property system, but rather to safeguard its proper functioning.

31. It is true that Article 40.1 uses cumulative “and” rather than alternative “or” language, but Article 40.1 is a provision with a narrow meaning, and, most likely, needs corrective reading.
32. Conversely, there are many possibly anti-competitive practices which do not affect technology transfer, e.g., restrictive licences concerning copyrights or trademarks.
33. It must be understood as a negative limitation preventing an application of national competition rules that outlaw generally accepted methods of exploiting intellectual property that TRIPS recognizes through requiring the protection of IPRs. It is therefore the systematic development of national competition law as a general curtailment of intellectual property protection (as required by TRIPS) that the consistency requirement is intended to prevent. It is difficult to specify in the abstract what might amount to inconsistencies with this requirement. As a general proposition, it may be said that anti-trust rules which would tend to *systematically* invalidate the constitutive elements of intellectual property protection by exclusive rights, as distinguished from subjecting licensing obligations in *particular* circumstances to rules regulating anti-competitive practice, would be inconsistent with TRIPS.
34. *Article 40.1* - Members agree that some licensing practices or conditions pertaining to intellectual property rights which restrain competition may have adverse effects on trade and may impede the transfer and dissemination of technology. *Article 40.2* - Nothing in this Agreement shall prevent Members from specifying in their legislation licensing practices or conditions that may in particular cases constitute an abuse of intellectual property rights having an adverse effect on competition in the relevant market. As provided above, a Member may adopt, consistently with the other provisions of this Agreement, appropriate measures to prevent or control such practices, which may include for example exclusive grantback conditions, conditions preventing challenges to validity and coercive package licensing, in the light of the relevant laws and regulations of that Member.

but also unilateral practices.³⁵ *Third*, in accordance with the Agreement's rationale of improving international trade relations, Article 8.2 covers all practices affecting international transfer of technology, both inbound and outbound.³⁶

During the Doha negotiations, Articles 7 and 8 were singled out for their special importance. Paragraph 19 of the Ministerial Declaration stated explicitly that the work of the TRIPS Council shall be guided by the objectives and principles set out in Articles 7 and 8 of the TRIPS and shall take fully into account the development dimension.³⁷ Although the legal effect of this document remains unclear, the document may lead a panel to take a longer look at to how these provisions should be interpreted in the context of the Agreement as a whole, especially with respect to the need for balance.³⁸

Articles 7 and 8 become even more important in light of the many ambiguities built into the TRIPS. These provisions provide policymakers, WTO panels, and the Appellate Body with objective clues as to how ambiguous words in the TRIPS are to be interpreted. The context provided by Articles 7 and 8 may also be of particular importance to correctly interpret the extent of several obligations and exceptions under the TRIPS.³⁹ These ambiguities are constructive because they can be strategically interpreted and deployed to provide third world with additional room to implement their obligations under the TRIPS.⁴⁰ If strategically used, they will allow these countries to actively push for interpretations that meet their needs, interests, and goals.⁴¹

Using Articles 7 and 8 as help to interpret the object and purpose is only a starting point. There are inherent difficulties in that as the Articles seek to capture competing objectives and purposes, and they represent a compromise between the disparate views of those entering the agreement. What amounts to "promotion of

35. Such as abusive refusals to license or to pre-disclose information on innovations affecting related industries (spare parts, complementary equipment or services etc.)

36. See supra note 7 at 550.

37. Available at: http://www.wto.org/english/tratop_e/dda_e/dohaexplained_e.htm (visited on 23 September 2011)

38. See supra note 16.

39. Ibid.

40. Ibid.

41. Ibid.

technological innovation and to the transfer and dissemination of technology” is, by its nature, open to some debate and the viewpoint of any WTO member is likely to relate to its economic position.⁴² As a result, it is important for third world to interpret the provisions in a way that would highlight the social aspect, development dimension, and public policy goals of the TRIPS. Article 7 could be invoked to limit an obligation to protect or enforce a given intellectual property right where no promotion of intellectual innovation and transfer or dissemination of technology can be proven. To help restore the balance of the international intellectual property system, the TRIPS therefore needs to be interpreted through a pro-development lens, with an emphasis on the objectives and principles set forth in Articles 7 and 8 of the TRIPS and the flexibilities expressly recognized in those provisions.⁴³ If such interpretations are to be developed, then it is also essential to develop model laws, policies, and best practices that are development friendly and that take account of the needs, interests, and goals of third world. Because these models can serve as good starting points for international negotiations, they are particularly useful as a response to the growing use of “TRIPS-plus” bilateral and regional trade agreements.⁴⁴

Although the provisions may not provide a legal basis for challenging intellectual property laws and policies in developed countries in the WTO dispute settlement process, both provisions can be used to strengthen other operative provisions that promote social and economic welfare or that help preserve the balance of the intellectual property system.⁴⁵ For example, Articles 66.2⁴⁶ and 67⁴⁷ of the TRIPS,

42. Ibid.

43. Ibid.

44. Ibid.

45. Ibid.

46. Article 66.2 of the TRIPS Agreement states that “Developed country Members shall provide incentives to enterprises and institutions in their territories for the purpose of promoting and encouraging technology transfer to least-developed country Members in order to enable them to create a sound and viable technological base”.

47. Article 67 of the TRIPS Agreement states that “In order to facilitate the implementation of this Agreement, developed country Members shall provide, on request and on mutually agreed terms and conditions, technical and financial cooperation in favour of developing and least-developed country Members. Such cooperation shall include assistance in the preparation of laws and regulations on the protection and enforcement of intellectual property rights as well as on the prevention of their abuse, and shall include support regarding the establishment or reinforcement of domestic offices and agencies relevant to these matters, including the training of personnel”.

require developed countries to provide technology transfer and technical cooperation. Doha Ministerial Decision of 2001, which covers implementation-related issues and concerns, reaffirmed the mandatory nature of the provision.⁴⁸ The decision further required the TRIPS Council to “put in place a mechanism for ensuring the monitoring and full implementation of the obligations in question.”⁴⁹ With fortifications from Articles 7 and 8, Articles 66.2 and 67 are likely to become even more robust and effective.⁵⁰

In addition, Articles 7 and 8 may feature prominently in the review processes established by the TRIPS Council, WTO bodies, and other international organizations. For example, numbers of developing countries have already indicated that the implementation of Article 7 should be examined in the Council for TRIPS in the context of determining whether TRIPS is fulfilling the objective of contributing to the dissemination and transfer of technology.⁵¹

Articles 7 and 8 can serve as a useful bridge that connects the TRIPS regime with those other regimes that may be implicated by the protection and enforcement of intellectual property rights. The language of Article 7 has recently been incorporated into a recommendation adopted as part of the WIPO Development Agenda.⁵² Articles 7 and 8 of the TRIPS, therefore, are important for maintaining the balance in not just the TRIPS regime, but also in the global innovation system.⁵³

48. Paragraph 11.2 stated that “Reaffirming that the provisions of Article 66.2 of the TRIPS Agreement are mandatory, it is agreed that the TRIPS Council shall put in place a mechanism for ensuring the monitoring and full implementation of the obligations in question. To this end, developed-country Members shall submit prior to the end of 2002 detailed reports on the functioning in practice of the incentives provided to their enterprises for the transfer of technology in pursuance of their commitments under Article 66.2. These submissions shall be subject to a review in the TRIPS Council and information shall be updated by Members annually”.

49. *Ibid.*

50. See *supra* note 16.

51. *Ibid.*

52. As Recommendation 45 states specifically: To approach intellectual property enforcement in the context of broader societal interests and especially development-oriented concerns, with a view that “the protection and enforcement of intellectual property rights should contribute to the promotion of technological innovation and to the transfer and dissemination of technology, to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare, and to a balance of rights and obligations”, in accordance with Article 7 of the TRIPS Agreement.

53. See *supra* note 16.

While it remains important to strengthen safeguards in the international intellectual property system, it is equally important to develop support in other international instruments that can be used to enhance the impact of Articles 7 and 8 within the TRIPS. With the support of these additional standards, Articles 7 and 8 may more effectively persuade the WTO panels and the Appellate Body to recognize and give effect to developmental priorities. In fact, it may be useful in the context of dispute settlement to cross-reference developmental objectives and principles of the appropriate agreements. After all, the Preamble of the TRIPS states the drafters' intention to recognize the underlying public policy objectives of national systems for the protection of intellectual property, including developmental and technological objectives.⁵⁴

V. Technology Transfer to Least-Developed Countries

Article 66.2 of TRIPS provides:

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

There are several noteworthy aspects of this Article. *First*, it requires only developed countries to provide incentives, and only to the LDCs. No obligations or rights are created for the developing and transition countries. *Second*, that it is a positive obligation as indicated by use of the word “shall” and this fact was clarified by the Doha Declaration. Thus, developed nations must find means to define and provide such incentives. *Third*, while the incentives involved must promote and encourage technology transfer, the language does not say that they must actually achieve increases in Technology Transfer. Indeed, governments cannot coerce private firms to take up these incentives. Firms are presumably more likely to engage in Technology Transfer where they can profit from it.⁵⁵

The precise scope and nature of the duty is not defined in any detail. Thus, there would appear to be considerable discretion on the part of the developed country

54. Ibid.

55. See *supra* note 3 at 30.

Member as to how to discharge this duty.⁵⁶ However, it is clear that the duty exists and must be discharged. This reading is consistent with the general objectives of TRIPS, as laid out in Articles 7 and 8, where the protection of IPRs is seen as having to contribute to the promotion of technological innovation and the transfer and dissemination of technology, to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare, and to the balance of rights and obligations. Moreover, the Doha Ministerial Declaration expressly reaffirmed the mandatory nature of the provisions under Article 66.2.⁵⁷

An interesting interpretive question is whether Article 66.2 may be complied with on the basis of programs (as maintained by several development aid agencies) mainly aimed at providing technical assistance that substantially involves the transfer of readily accessible, generally mature technologies already available from the public domain. The object of the TRIPS is the protection of IPRs. It does not deal with public-domain technologies. Hence, the only logical interpretation seems to be that the obligation under Article 66.2 will be satisfied if developed countries adopt incentives that encourage the transfer of technologies subject to IPRs, and not merely unprotected technologies. Nevertheless, LDCs may benefit from transfers of non-proprietary technologies, such as knowledge provided by consultants, machinery manufacturers and other suppliers. In fact, in an early industrialization phase licensing of technology may play a secondary role as a technology source, compared to suppliers of equipment and materials and clients.⁵⁸ Finally, the obligation to encourage technology transfer includes proprietary technology and not only technology in the public domain. The latter is more easily accessible, whereas the transfer of the former is in the exclusive discretion of the holder of the respective right.⁵⁹

In order to ensure that developed countries meet their obligations under Article 66.2 sufficiently, and that LDCs receive the proper benefits in exchange for adopting

56. However, that some precision has been added to this provision through the decision by the Council for TRIPS concerning the implementation of Article 66.2 of the TRIPS Agreement.

57. See supra note 7 at 730.

58. Keith E. Maskus and Jerome H. Reichman (eds.), *International Public Goods and Transfer of Technology Under A Globalized Intellectual Property Regime* 252 (Cambridge, New York, 2005).

59. See supra note 7 at 730,731.

the minimum level of IPRs required by TRIPS, some minimum standard and method of evaluation should be enacted. Indeed, because LDCs are required under TRIPS to adopt a somewhat specific minimum level of IPRs, developed countries should be held to an equally specific standard for meeting their Technology Transfer obligations under the agreement.⁶⁰

Leading authorities on technology transfer have identified increasing human capital and the technological base in LDCs as one of the most effective methods to ensure that the IP protections required by TRIPS result in an increased inward flow of technology transfer to LDCs. The reports submitted by developed countries to the TRIPS Council reflect that some of this type of investment is indeed occurring.⁶¹ Detailed review of reports reveal that implementation of Article 66.2 has improved slightly in the past decade.⁶² Moreover, few new initiatives have been taken but virtually all are continuing from prior policy decisions. There are virtually no programs aimed specifically at the LDCs, rather their benefits are available to all developing countries or even developed countries.⁶³ Thus, some developed countries have taken some steps though implementation of Article 66.2 could be improved.⁶⁴ Steps should be taken to implement Article 66.2 because it is mandatory in nature and one of the key elements in the trade-off between rights and obligations under TRIPS.⁶⁵

A substantive minimum standard would help generate improvement simply by informing LDCs of what they should expect from developed countries, and allowing them to hold developed countries accountable for meeting that standard. If experts on technology transfer devise the standard, it would lead to increased efficiency in

60. Andrew Michaels [HYPERLINK "http://international.westlaw.com/Find/Default.wl?DB=PROFILER%2DWLD&DocName=0302375101&FindType=h&AP=&mlac=FY&spa=intbanhin-000&rs=WLIN10.01&ifm=NotSet&fn=_top&sv=Split&mt=GlobalNews&utid=1&vr=2.0&pb=761981BC"](http://international.westlaw.com/Find/Default.wl?DB=PROFILER%2DWLD&DocName=0302375101&FindType=h&AP=&mlac=FY&spa=intbanhin-000&rs=WLIN10.01&ifm=NotSet&fn=_top&sv=Split&mt=GlobalNews&utid=1&vr=2.0&pb=761981BC), "International Technology transfer and TRIPs Article 66.2: Can Global Administrative Law Help Least Developed Countries Get What They Bargained For?", 41 *Geo. J. Int'l L.* 223 (2009).

61. All reports are available at: <http://docsonline.wto.org> (visited on 26 September 2011).

62. Suerie Moon, *Does TRIPS Art. 66.2 Encourage Technology Transfer to LDCs? An analysis of Country Submissions to the TRIPS Council (1999-2007)* (UNCTAD-ICTSD Project on IPRs and Sustainable Development, Policy Brief No. 2, Dec. 2008).

63. See supra note 3 at 35.

64. See supra note 62.

65. TRIPS Council, *Minutes of Meeting: Held in the Centre William Rappard on 28 October 2008* (Feb. 6, 2009) 162-164, IP/C/M/58.

the efforts of developed countries, by focusing their efforts on the most effective ways of enhancing Technology Transfer to LDCs.⁶⁶

TRIPS is a classic example of a regime in need of administration.⁶⁷ WIPO would actually be a better forum for the administration of TRIPS because of its expertise in IP, as opposed to the TRIPS Council's focus on trade expertise.⁶⁸ However, since technology transfer involves many trade issues besides IPRs, the ideal situation may be for the Council to administer Article 66.2 based upon its expertise in trade matters, and invite WIPO to bring its IP expertise to bear on the decision-making process.⁶⁹

The proposals and statements leading to the WIPO development agenda seem to recognize the need for stronger technology transfer requirements in the world IP regime. The representative of India recognized that "for developing countries to benefit from providing IP protection to western rights holders there has to be some obligation on the part of developed countries to transfer and disseminate technologies to developing countries."⁷⁰ Argentina and Brazil deemed it important that "clear provisions on transfer of technology be included in the treaties currently under negotiation in WIPO."⁷¹ WIPO,

66. See supra note 60.

67. Rochelle Cooper Dreyfuss, "Fostering Dynamic Innovation, Development and Trade: Intellectual Property as a Case Study in Global Administrative Law" IILJ Working Paper 4 (Global Administrative Law Series) 19-26(2008)

68. Ibid.

69. See supra note 60.

70. WIPO, *Proposal for Establishing a Development Agenda for WIPO-India* (Oct. 1, 2004). Available at: www.cptech.org/ip/wipo/india10012004.html (visited on 8 October 2011).

71. WIPO, *Proposal by Argentina and Brazil for the Establishment of a Development Agenda for WIPO* (August 27, 2004) WO/GA/31/11. on issue of the development dimension and the transfer of technology mentioned in Annex, page 3 submitted that: "The transfer of technology has been identified as an objective that intellectual property protection should be supportive of and not run counter to, as stated in Articles 7 and 8 of the TRIPS Agreement. Yet, many of the developing countries and LDCs that have taken up higher IP obligations in recent years simply lack the necessary infrastructure and institutional capacity to absorb such technology.

Even in developing countries that may have a degree of absorptive technological capacity, higher standards of intellectual property protection have failed to foster the transfer of technology through foreign direct investment and licensing. In effect, corrective measures are needed to address the inability of existing IP agreements and treaties to promote a real transfer of technology to developing countries and LDCs.

In this regard, a new subsidiary body within WIPO could be established to look at what measures within the IP system could be undertaken to ensure an effective transfer of technology to developing countries, similarly to what has already been done in other fora such as the WTO and the UNCTAD. Among these

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This obligation already exists in the form of TRIPS Article 66.2, and WIPO could increase its clarity and enforceability by working with the TRIPS Council to establish a substantive minimum standard for Technology Transfer incentives.⁷²

A formal partnership between WIPO and the Council for TRIPS has already been established through the WTO.⁷³ This partnership is reaffirmed by the development agenda, which requests that WIPO “intensify its cooperation on IP-related issues with UN agencies...especially WTO.”⁷⁴ WIPO recently established a Committee on Development and Intellectual Property (CDIP) to work towards

measures, we note with particular interest the idea of establishing an international regime that would promote access by the developing countries to the results of publicly funded research in the developed countries. Such a regime could take the form of a Treaty on Access to Knowledge and Technology. It is also important that clear provisions on transfer of technology be included in the treaties currently under negotiation in WIPO.”

72. See supra note 60.

73. Agreement between the World Intellectual Property Organization and the World Trade Organization (December 22, 1995) available at: http://www.wipo.int/treaties/en/agreement/trtdocs_wo030.html (visited on 27 September 2011).

74. Recommendation 40 mention “To request WIPO to intensify its cooperation on IP related issues with United Nations agencies, according to Member States’ orientation, in particular UNCTAD, UNEP, WHO, UNIDO, UNESCO and other relevant international organizations, especially the WTO in order to strengthen the coordination for maximum efficiency in undertaking development programs.”

implementing the development agenda.⁷⁵ By collaborating with the TRIPS Council on technology transfer issues, CDIP could both work towards its goal of implementing the development agenda and help the TRIPS Council work towards a better implementation of Article 66.2. Thus, collaboration between WIPO and the TRIPS Council on implementation of Article 66.2 would likely be both practical and beneficial.⁷⁶

VI. Technical Cooperation to Developing Countries

Article 67 of TRIPS provides:

“In order to facilitate the implementation of this Agreement, developed country Members shall provide, on request and on mutually agreed terms and conditions, technical and financial cooperation in favour of developing and least-developed country Members. Such cooperation shall include assistance in the preparation of laws and regulations on the protection and enforcement of intellectual property rights as well as on the prevention of their abuse, and shall include support regarding the establishment or reinforcement of domestic offices and agencies relevant to these matters, including the training of personnel.”

Considering the lack of experience and expertise in intellectual property issues prevailing in many developing and least-developed country Members, the need for technical cooperation for those countries is obvious. It is of crucial importance in this respect that policy makers of developing countries are fully aware of the inherent flexibilities under TRIPS Agreement that may be used during the negotiations of bilateral and multilateral technical cooperation for the realisation of development goals.

75. The WIPO General Assembly, in its session held in September-October 2007, decided to adopt the recommendations for action on the 45 agreed proposals, and to immediately implement the 19 proposals identified by the Chair of the PCDA, in consultation with Member States and the Secretariat. The General Assembly also decided to establish a Committee on Development and Intellectual Property (CDIP) to: **(a)** develop a work-program for implementation of the adopted recommendations; **(b)** monitor, assess, discuss and report on the implementation of all recommendations adopted, and for that purpose it shall coordinate with relevant WIPO bodies; and **(c)** discuss intellectual property and development related issues as agreed by the Committee, as well as those decided by the General Assembly. It was also decided that the Committee would report and may make recommendations annually to the General Assembly.

76. See supra note 60.

The TRIPS Agreement itself provides no definition of technical cooperation activities. However, some guidance on what IP-related technical cooperation might involve was provided by the Council for Trade-Related Aspects of Intellectual Property Rights (TRIPS Council) on 26 April 1996, when it summarised the information on technical cooperation activities presented by WTO members. The TRIPS Council categorised technical cooperation as: general cooperation in the development of human resources; assisting in the preparation of laws and regulations on the protection and enforcement of IPRs as well as on the prevention of their abuse; support regarding the establishment or reinforcement of the relevant domestic offices and agencies; and other types of cooperation, specifically the promotion of public awareness of intellectual property and the exploitation of intellectual property rights.⁷⁷

The Secretariat of the World Trade Organisation (WTO) provides a limited amount of technical cooperation, mainly to explain the rights and obligations under the TRIPS Agreement to developing country member states or observers and to provide information of the progress of ongoing negotiations in the TRIPS Council on IP-related issues. Under the WTO-WIPO cooperation agreement, much of the WTO's role in the explanation of the TRIPS Agreement is delegated to World Intellectual Property Organization (WIPO).⁷⁸

However, WIPO is a multilateral organization with an explicit mandate to promote intellectual property protection.⁷⁹ Since about ninety per cent of WIPO's funding comes not from member governments but from the private sector in the form of fees paid by patent applicants made under the Patent Cooperation Treaty (PCT), it has been characterized as a firm advocate of stronger intellectual property protection in developing countries.⁸⁰ In the recent past WIPO's technical Cooperation activities have come in for criticism for a variety of reasons. The

77. Keith E. Maskus, "Using the International Trading System to Foster Technology Transfer for Economic Development", *Mich. St. L. Rev* 219 (2005).

78. Tom Pengelly, "Technical Assistance for the Formulation and Implementation of Intellectual Property Policy in Developing Countries and Transition Economies" 14 (ICTSD Programme on IPRs and Sustainable Development), Issue Paper No. 11, 2005.

79. Duncan Matthews, "TRIPS Flexibilities and Access to Medicines in Developing Countries: The Problem with Technical Assistance and Free Trade Agreements" 27(11) *EIPR* 420 (2005).

80. *Ibid*

organization's activities which include courses, seminars and legislative services, have been criticized, in particular, because they are geared to facilitate the implementation of TRIPS Agreement meaning that the emphasis of the programmes is on performance of the obligations in the Agreements by the developing countries and least-developed countries. It is argued that this cooperation is unlikely to help developing countries tailor their intellectual property laws to meet their technological and other development objectives and to employ TRIPS flexibilities.⁸¹

At a bilateral level, most developed country initiatives undertaken by way of providing technical cooperation fall within the remit of fulfilling obligations under Article 67 of TRIPS Agreement. However, there are in-built limits to Article 67 that have important consequences for the quantity and quality of technical cooperation provided. By requiring developing countries to request cooperation from developed country members, and by requiring the providers and recipients of technical cooperation to mutually agreed terms and conditions, there is a risk that Article 67 perpetuates a dependency culture. By making explicit reference to the fact that technical cooperation under Article 67 "shall include" the provision of cooperation associated with the protection and enforcement of intellectual property rights, Article 67 fails to place an explicit obligation on developed countries to assist developing countries in utilising TRIPS flexibilities such as those in relation to Objectives and Principles, compulsory licences, anti-competitive contractual licences and technology transfer. As a result, developed countries have largely limited their technical cooperation activities to protection and enforcement activities.⁸²

In pursuance of Article 67 of the TRIPS Agreement India has signed bilateral Agreements with developed countries and multilateral institutions in the recent past. It includes Australia, Germany, Switzerland, Japan, UK, USA, Canada, European Patent Office and WIPO.⁸³ The areas of cooperation include, *inter alia*, capacity building, public education and awareness, information exchange and experience share, consultation, joint studies on specific issues, human resource development,

81. Sisule F. Musungu, "2nd Bellagio Series on Development and Intellectual Property", ICTSD UNCTAD Dialogue 6 (Sept. 2003).

82. See supra note 79.

83. http://dipp.nic.in/index_mou_ipr.htm (Accessed 11 Sept. 2011).

training and management of officials, automation etc. Moreover, provisions of all the Agreements overlap with each other and fail to include technical cooperation in key sector specific areas where India actually needs cooperation to use flexibilities inherent in the TRIPS Agreement to pursue its technological and other development objectives.

On the basis of the analysis of submissions made by the United States, Japan and the European Communities to the TRIPS Council in relation to Article 67 reveals that bilateral technical cooperation tends to emphasize intellectual property protection and enforcement objectives that are priority areas for foreign right holders operating in developing countries.⁸⁴ The presence of strong private sector involvement in close coordination with government agencies of developed countries indicates that advice being provided to developing countries is closely linked to private business interests. So, there are attendant risks of the institutional orientations of the providers as well as other factors such as political considerations.⁸⁵ This carries with it the risk that technical cooperation activities do not present developing countries with all available options when implementing the TRIPS Agreement.⁸⁶

Meanwhile, Foreign Trade Agreements (FTAs) between developed and developing countries pose new challenges. Even though they consolidate important market access opportunities in developed countries, experts and civil society groups have expressed concern that the TRIPS- plus provisions in these agreements raise many implementation challenges in terms of policy coherence and ultimately reduce opportunities to use the flexibilities built into the TRIPS Agreement. FTAs have even limited, to a certain extent, some of the flexibilities inbuilt in the TRIPS Agreement.⁸⁷

VII. Conclusion

The TRIPS Agreement was essentially conceived as a means of strengthening the control by rights holders over intellectual creations and technologies, and not

84. See supra note 81.

85. Ibid.

86. See supra note 77.

87. Roffe Pedro, Vivas David & Vea Gina, "Maintaining Policy Space for Development: A Case Study on IP Technical Assistance in FTAs" 3 (ICTSD Programme on IPRs and Sustainable Development), Issue Paper No. 19, 2007.

with the objective of increasing the transfer and use of technology globally. The technology transfer was not, in fact, a concern of TRIPS proponents and the possible effects of the new protectionist standards on such transfer were never seriously considered during the negotiations or thereafter. However, the TRIPS Agreement includes a number of flexibilities to facilitate technological development and transfer of technology. To safeguard these flexibilities, Preamble and Articles 7 and 8 play important roles in the interpretation and implementation of the Agreement. Articles 7 and 8 become even more important in light of the many ambiguities built into the TRIPS. These ambiguities are constructive because they can be strategically interpreted and deployed to provide third world to actively push for interpretations that meet their needs, interests, and goals.

The evidence arising from the review of annual reports of country members to the TRIPS Council does not give a satisfactory picture of compliance of Article 66.2. There is no definitional clarity regarding the terms “technology transfer” and “developed country”. Therefore, many developed countries have never submitted a report. There is also irregularity in submission of annual reports to the TRIPS Council. In addition, a majority of the programmes and policies reported do not specifically target LDCs of WTO. Furthermore, a significant number of programmes for LDCs do not actually target technology transfer. In order to improve the situation WTO members should agree to expand Article 66.2 of TRIPS to include all developing countries, or at least those without a significant domestic science and technology base. It should also agree on a definition of technology transfer. A list of country and sector specific programmes of technology transfer should be adopted by TRIPS council to all developing and LDCs.

Technical cooperation under TRIPS Agreement offered by multilateral institutions and developed countries is not appropriate to the needs of the developing countries but rather tilted in favour of the interest of intellectual property holders. Current trends of technical cooperation fail to take into account both the development needs of developing member countries and the flexibilities under TRIPS Agreement. This assessment of technical cooperation requirements of a developing country should be based on case-by-case basis. A list of country and

sector specific programmes of technical cooperation should be adopted by TRIPS council to provide guidelines for developed and multilateral institutions. Building capacity for regulation of IPRs, particularly in relation to matters of special public interest such as with compulsory licensing, controlling anti-competitive practice by rights holders and technology transfer should be given higher priority in technical cooperation programmes for developing countries in the future. The existence of such policies should be recognised as a necessary part of developing a coherent approach to the implementation of international intellectual property related commitment.