

WORLD TRADE ORGANISATION'S INTELLECTUAL PROPERTY  
RIGHTS PROTECTION AND TECHNOLOGY TRANSFER TO  
DEVELOPING COUNTRIES

Adrià Reyes i Langa

Sustainable Development and Protection of the Environment

Master's degree in Diplomacy and International Civil Service

Centro de Estudios Internacionales

# INDEX

## 1 INTRODUCTION

## 2 INTELLECTUAL PROPERTY RIGHTS

## 3 TECHNOLOGY TRANSFER

### 3.1 Domestic policy instruments to increase technology transfer

### 3.2 Technology transfer and environment protection

## 4 THE AGREEMENT ON TRADE-RELATED ASPECTS OF INTELLECTUAL PROPERTY RIGHTS (TRIPS)

### 4.1 Criticism

### 4.2 Technology transfer in the trips agreement

#### 4.2.1 *Article 8.2 and article 40*

#### 4.2.2 *Article 29.1*

#### 4.2.3 *Compulsory licenses*

#### 4.2.4 *Article 66.2*

## 5 REFORM PROPOSALS

## 6 CONCLUSIONS

## 7 BIBLIOGRAPHY

## **1 INTRODUCTION**

The relationship between intellectual property rights (and TRIPS agreement as part of an international trade regime which strongly protects them) and technology transfer to developing countries is a complex one. Much has been said and written on the economic and legal implications of strong intellectual property rights systems with regards to development, and the goal of this work is not to make a comprehensive assessment of the state of the academic opinion on the broad topic of intellectual property rights in relation to development, but to simply approach the subject of TRIPS agreement in relation to technology transfer, while addressing a little more thoroughly the meaning of some of the relevant provisions this agreement contains.

This paper, as stated, tries to approach the subject, to outline the main arguments that have been put for and against strong intellectual property rights with regards to technology transfer to developing countries, and it goes into some detail to describe, put into context and discuss the legal extent and the potential effects of the provisions contained within TRIPS agreement that address technology transfer and that put limits to those provisions of member states' domestic regulation of intellectual property rights that could be put in place in order to increase technology transfer and technology diffusion. Finally, some proposals of change and possible reform within TRIPS agreement and its interpretation to increase technology transfer to developing nations are briefly addressed.

## **2 INTELLECTUAL PROPERTY RIGHTS**

Legal protection of intellectual property is an idea that has been around for centuries. Although we can trace its origins back to the Venetian Republic in 1474, the two principles that have consistently composed intellectual property rights systems throughout the ages have remained the same (MAY and SELL 2006). The first element implies that the inventor has to disclose the content of his or her invention in order to obtain the second and most important element: the guarantee that the government will protect the inventor's rights to exclusive exploitation of the invention, meaning that

such invention will only be able to be used or copied with express authorization from the inventor (or alternatively, the holder of the invention's IP rights).

The justification of this system is based mainly on three assumptions. First, that the creative activity which leads to new inventions is a costly and uncertain process, for it can lead to useful and profitable inventions but also to useless ones or even failure. Second, that without legal protection, the inventions can be easily and cheaply copied and exploited by others. And third, that the first two circumstances lead to an underinvestment in creative processes due to a lack of incentives to invest in them. Therefore, it is argued, without intellectual property rights a society can become acutely sub-optimal as to its potential to develop new inventions and also unable to stay competitive in the globalized world (ARCHIBUGI and FILIPETTI 2010, 138).

Governments can have strong or weak intellectual property rights systems, depending on the degree in which the infringements of said rights are prosecuted and the owners compensated by the justice system. Depending upon this decision, the economic and social effects of intellectual property rights (or lack thereof) can be very substantial, and this is also (if not especially) true for developing countries.

### **3 TECHNOLOGY TRANSFER**

In spite of all the alleged benefits of a strong intellectual property rights system, there is one substantial problem when it comes to try to universalize said system among, in one hand, nations that have knowledge and have the economic and social preconditions for this knowledge to be generated, and on the other nations that have none of those. This technology gap between developed countries and developing countries, when met by an almost-ubiquitous system of strong protection of developed nations' knowledge leads to the perpetuation of said gap and the chronic lack of technology that these poor countries suffer.

To counter this grave concern, the remedy of technology transfer has been put forward. Technology transfer understood in a broad sense means "the arrival or the transfer of a certain technology to a country where it has not been used before" (HOPPE 2005, 1). When we are in the context of development policy in relation to international trade, this means that technology originating in developed countries reaches developing countries. This is mainly accomplished when the owner of a patent or a copyright or

someone to whom the owner licenses this intellectual property right produces this technology for a specific application in a developing country. Technology transfer, though, is not limited to the mere arrival of technology to a country, as it is widely understood that it also encompasses the successful integration or diffusion of said technology into the recipient country's productive processes (MASKUS and SAGGI 2014, 5 Annex I) (KAYNAK 1985, 155-156) (HAYDEN 1976, 24).

In fact, UNCTAD's (never born) Draft International Code of Conduct on Transfer of Technology (UNCTAD 1985) defined Technology Transfer as "*the transfer of systematic knowledge for the manufacture of a product, for the application of a process or for the rendering of a service and does not extend to the mere sale or lease of goods*". More specifically, it established five ways in which technology could be transferred between countries:

- The assignment, sale and licensing of all forms of industrial property, except for trade marks, service marks and trade names when they are not part of technology transfer transactions;
- The provision of know-how and technical expertise in the form of feasibility studies, plans, diagrams, models, instructions, guides, formulae, basic or detailed engineering designs, specifications and equipment for training, services involving technical advisory and managerial personnel, and personnel training;
- The provision of technological knowledge necessary for the installation, operation and functioning of plant and equipment, and turnkey projects;
- The provision of technological knowledge necessary to acquire, install and use machinery, equipment, intermediate goods and/or raw materials which have been acquired by purchase, lease or other means;
- The provision of technological contents of industrial and technical cooperation arrangements"

Thusly understood, we could be lead to think that most foreign direct investment in these countries contributes to technology transfer, and therefore, to development. But it has been observed that transnational companies usually transfer technologies that, even though are more advanced than technologies that previously existed in the receiving country, are still far behind the most advanced technologies available (MANSFIELD and ROMEO, Technology transfer to overseas subsidiaries by U.S.-based firms 1980, 737-750). Furthermore, transnational companies, which are the main source of foreign direct investment in developing countries, tend to concentrate their research and development facilities and personnel in developed countries (UNCTAD 1999, 199-202), while investing in projects related to adaptation and technical support of their innovations rather than directly innovating in developing countries (UNCTAD

2001, 20). It should be noted, though, that even if the innovative process isn't happening in the host country of a transnational company, one of the involuntary externalities of its activity is the technology diffusion in the host country, which often happens when local personnel or companies become involved in the productive process of a transnational company, acquiring in the way technology and skills, or when local companies imitate these processes to be able to compete in the market.

Therefore, measures to force or incentivize this transfer of technology to developing countries -so they are able to catch up and reduce the technological gap- have been demanded for long, mainly from this last group of countries and from international civil society.

### **3.1 Domestic policy instruments to increase technology transfer**

Aside from intellectual property rights systems, it is appropriate to say that national governments have other instruments to increase technology transfer. For example laws that promote competition, norms that establish some performance requirements for foreign companies to be able to operate in their territory (for instance, a government can require that a foreign company partakes in a joint venture with a local company, or that some of its research and development be produced locally).

Governments also have at their disposal a wide array of promotion instruments such as giving fiscal incentives, giving financial incentives or providing training facilities for their staff. In addition to this, some Latin American countries started in the 1970s to implement compulsory technology licensing laws, which consist on a permit by the government that allows, in certain cases defined by law, to exploit an invention regardless of intellectual property rights holder's consent. Its aim is to "prevent IPR owners from preventing third parties from gaining access to those goods or technology by relying on their exclusive rights over the IPRs in question", which ensures "that the development objectives of a host country economy would not be undermined by unequal terms in technology transfer transactions" (UNCTAD 1999, 17-20).

Some experts have suggested, in order to diminish the existing technology gap that exists between developing and developed countries by the previously described effect of transnational companies transferring newer but not the newest technology available, that developing countries can adopt measures such as "imposing a tax on low-

quality FDI production or providing a subsidy to imitation [and also] encouraging domestic R&D activities that push forward the technology frontier” (GLASS and SAGGI 1996, 391).

However we must have present that all these measures must be enacted in accordance with TRIPS agreement and all other WTO rules, and the extent to which a country can adopt these measures will be briefly discussed in this paper.

### **3.2 Technology transfer and environment protection**

One of the concerns that technology transfer to developing countries has awaken is regarding environmental policy. Because of that, the transfer of environmentally sound technologies has been included in the agenda of international investment agreements especially in relation to development. Recent international environmental agreements have put emphasis in the need for transnational companies to ensure that the technology they transfer to developing countries leads to good environmental results.

One of these environmental agreements that reflect this new concern is the United Nations Conference on Environment and Development, which in chapter 33 of its Agenda 21, states that:

“[...] mobilization of higher levels of foreign direct investment and technology transfers should be encouraged through national policies [transfers some of the modalities of which] could constitute important channels of transferring environmentally sound technologies”

And in its chapter 34 it calls for countries to

“[...] providing fair incentives to innovators that promote research and development of new environmentally sound technologies [and to explore] the concept of assured access for developing countries to environmentally sound technology in its relation to proprietary rights”

Additionally, one of the spaces in which technology transfer has been more pushed for by developing countries is the United Nations Framework Convention for Climate Change, and it can be observed that an increasing tendency to link environmental and development issues (and among those, technology transfer plays a crucial role) is arising, because of the higher costs developing countries have to incur in to implement environmental policy, and the fewer resources they have to do so.

#### **4 THE AGREEMENT ON TRADE-RELATED ASPECTS OF INTELLECTUAL PROPERTY RIGHTS (TRIPS)**

Emerging from the Uruguay Round of the General Agreement on Tariffs and Trade of 1994, this treaty, which was intensely lobbied for by the United States and other developed countries, was one of the integral parts of the foundation of the World Trade Organization, meaning every member of the WTO must be signatory to this treaty. In addition to this, developing countries have often been forced to adopt additional policies that strengthen intellectual property rights and to sign bilateral treaties (called TRIPS+) in order to have access to foreign investment and/or trade agreements (MAY and SELL, *Forgetting History is Not an Option! Intellectual Property, Public Policy and Economic Development in Context* 2007, 22-23).

The main goal of TRIPS agreement, and for that purpose, of any international rule regarding intellectual property rights, is to lessen the consequences that big disparities of intellectual property rights systems across different countries generate, mainly to avoid the discrimination to foreigners that is produced through domestic intellectual property rights legislation, and to lighten the legal and procedural burden that intellectual property rights holders have to endure if they want to expand their operations to foreign countries. (UNCTAD 1999, 18).

This treaty forces countries to have a strong intellectual property rights system, with a double economic reasoning. First, as mentioned before, it is assumed that intellectual property rights are a prerequisite for the markets to have an incentive to invest in creative and innovative activities in developed countries, making technological advance possible (and the stronger the intellectual property rights system, the better). Second, it is argued that a strong intellectual property rights system in developing countries contributes to encourage (although it is by no means a sufficient condition) foreign direct investment - foreign direct investment being the main source of technology transfer and technology diffusion in those countries (MASKUS 2000, 8) (BEIER 1980, 563-584). This is because –according to those accounts- “in order to stimulate the flow of inward FDI, a host country must ensure the protection of the foreign investors’ competitive advantage by offering legal protection of the IPRs by which that advantage is obtained” (UNCTAD 1999, 19), meaning that companies are more encouraged to invest in countries where they have a guarantee that they will be



able to control where and to whom they transfer their technology, and also that they will be able to exact the full amount of royalties they are owed.

#### **4.1 Criticism**

The official reasoning behind the strong implementation of intellectual property rights systems globally has been criticized in many of its points and assumptions.

First, the alleged virtuous cycle between intellectual property rights and innovation is often only to big transnational companies' benefit, "that are not very innovative at all, but mainly powerful distributors of innovation originating from smaller, more dynamic firms", and this is sometimes to the detriment of small and medium-sized companies (which are the ones doing most of the innovation, especially in developing countries), because strong intellectual property rights "expand and multiply exclusive rights, limit access to research commons, and diminish the space for reverse-engineering and other pro-competitive strategies built around value-adding applications of new technologies" (MASKUS and REICHMAN 2004, 311).

Second, the assumption that intellectual property rights encourage foreign direct investment is sometimes only partially correct and some other times highly overestimated (UNCTAD 1996, 17). It has been observed that intellectual property rights have variable degrees of importance according to which sector we are talking about: "Investment in lower-technology goods and services, such as textiles and apparel, electronic assembly, distribution, and hotels, depends far less on the strength of IPRs than on input costs and market opportunities [...] investment and technology transfer are relatively insensitive to IPRs in industries with standardized, labor-intensive technologies and products" (MASKUS and REICHMAN 2004, 2-4). In addition, foreign direct investment in itself, without the receiving country having the necessary technological and institutional infrastructures, research and development capacity and know-how to be able to incorporate technology and develop similar or new one, can be useless (UNCTAD 1996, 18).

It has also been widely acknowledged that the importance transnational companies give to intellectual property rights systems' strength when it comes to the decision whether or not to invest highly depends on the stage of the production chain that the company is considering relocating, i.e. companies will be very concerned with

intellectual property rights when deciding to move a research and development facility but much less so when considering to move assembly facilities (MANSFIELD 1994).

Third, strong intellectual property rights can have adverse effects in the process of technology transfer, as it has been noted that “patents could reduce technology diffusion by permitting restrictive licensing arrangements for critical technologies” (MANSFIELD 1994, 4). Also, one of the ways in which technology diffusion happens is through imitation, and the enforcement of a strong intellectual property rights system disrupts imitation, reducing technology transfer and also global innovation, because innovative firms expect slower loss of their technological advantages, reducing their need to further engage in research and development (HELPMAN 1993).

Furthermore, and this is very relevant, ethical concerns have arisen from the enforcement of intellectual property rights to products such as HIV/AIDS drugs in Sub-Saharan Africa, where millions of lives depend on having access to these drugs. Indeed, it has often been asked “at what point do rights-based incentives to invest in developing life-saving pharmaceutical products defeat the very purpose of saving lives?” (MAY and SELL 2007, 23).

#### **4.2 Technology Transfer in the TRIPS agreement**

Even though technology transfer is widely considered to have been a relatively neglected issue in the TRIPS agreement, to balance all the strong protection it granted to intellectual property rights, which imposed strong burdens to poor countries, with few benefits in exchange (MOON, Meaningful Technology Transfer to the LDCs: A Proposal for a Monitoring Mechanism for TRIPS Article 66.2 2011, 1), developing countries managed to introduce several clauses that protect technology transfer, seemingly to try to counter all the disadvantages intellectual property rights protection alone has for developing countries. This is reflected in the agreement’s part dedicated to objectives, which is article 7:

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

This article has led to widespread discussion on its meaning. While some consider this “*should*” to be a mere prediction or a literary anecdote, with a pure declarative value (CORREA 2005, 234), others have interpreted it as a positive obligation developed countries have to transfer technology to developing countries. Both these interpretations are unlikely, though, as the most reasonable function of this provision is to serve as a guide to interpret the rest of the treaty. This is reinforced by the Doha Ministerial Declaration on the TRIPS Agreement and Public Health, which said that

“In applying the customary rules of interpretation of public international law, each provision of the TRIPS Agreement shall be read in the light of the object and purpose of the Agreement as expressed, in particular, in its objectives and principles.”

This is to be understood as to mean that whenever a dispute of interpretation arises in the WTO Panels or in the Appellate Body, for example, article 7 of TRIPS, whose main feature is the transfer and dissemination of technology, should be used to resolve the matter. This only reasserts what is comprised in article 31 of the Vienna Convention on the Law of Treaties, which establishes that a treaty should be interpreted in a teleological manner. Having said that, the practice of the Appellate Body of the WTO has been to utterly disregard these considerations, and to exclusively have into account the concerns of patent owners (CORREA 2005, 235).

#### **4.2.1 Article 8.2 and article 40**

Another important article about technology transfer in TRIPS agreement is article 8.2:

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

This would seemingly allow States to act against intellectual property rights abuses by their owners, such as unreasonably high royalties, via the previously mentioned domestic measures, although these have to be “consistent with provisions in this agreement”.

One of the possible applications of article 8.2 is the control of anti-competitive practices in contractual licenses, which is to be found in article 40 of the treaty. Article 40 establishes that some practices related to the licensing of intellectual property rights may be exercised in a way that “adversely affects” competition, and so it allows States to enact legislation to control or prevent such practices:

“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”

Such regulations must be judged on a case-by-case basis to see if they meet the requirements in order to be compatible with TRIPS agreement: that there be an abuse of intellectual property rights and that such an abuse adversely affects competition (CORREA 2005, 237). Some clear examples of this practices can be found in the treaty itself: “grantback conditions, conditions preventing challenges to validity and coercive package licensing”.

#### **4.2.2 Article 29.1**

Article 29.1 establishes the obligation of anyone who wishes to register a patent to disclose it with sufficient detail so as a person “skilled in the art” can reproduce it. It could be argued that this immediately allows for technology transfer to developing countries, but we have to have into account that the patent owner usually gives as few details as possible as to avoid imitation (CORREA 2005, 239), and that although the information may be available, its use is still subject to the patent owner’s consent.

We should also consider that simple information about a patent seldom enables the possessor of that information to unravel the full extent of its capabilities. In this light, it is useful to make the distinction between information (which is easily and cheaply transmitted once it becomes public) and knowledge (which is only transmittable if the receiver invests time and effort to learn it), which includes the know-how that is necessary to successfully implement a technology (ARCHIBUGI and FILIPETTI 2010,

139). There is also what has been called tacit knowledge, which is a kind of knowledge that can't be codified because it relies on intangibles like instinct (POLANYI 1967).

#### **4.2.3 Compulsory licenses**

Laws establishing compulsory licenses systems put forward the notion that in some cases, patents and copyrights should be accessible by everyone, provided they pay a price fixed by law. This is done by forcing intellectual property rights owners to give licenses to their rights in exchange for a fixed price. This is intended to first, activate non-working patents, second, avoid abuse of intellectual property rights, and third, to protect national interest more broadly (HALEWOOD 1997, 260), for example by facilitating technology transfer through local companies being licensed said technology.

This is regulated in Article 31 of TRIPS agreement, which puts severe requirements for compulsory licenses to be in accordance with the rules of international commerce regime. The first case in which compulsory licenses may be granted is when the intellectual property right holder refuses to work their right or demand unreasonable terms to do so. In this case, it is stated that for the State to grant a compulsory license to a third party, this party has had to make

“[...] efforts to obtain authorization from the right holder on reasonable commercial terms and conditions and that such efforts have not been successful within a reasonable period of time”

The second case in which a State may use compulsory licensing is in a case of “national emergency or other circumstances of extreme urgency”, but it is nevertheless subject to some duties:

“In situations of national emergency or other circumstances of extreme urgency, the right holder shall, nevertheless, be notified as soon as reasonably practicable”

The third case in which this is practicable is “in cases of public non-commercial use”, in which case, if the State knows or is able to know that an intellectual property right will be used, it also has to notify the rights holder.

All these cases are also subject to additional limitations contained in article 31. To name only a few: the scope and duration of licenses must be exclusively to cover the purpose for which it was granted; the use of the licenses must be non-exclusive and non-assignable; the use must be directed “predominantly for the supply of the domestic market”; and the intellectual property rights holder must be compensated according to the economic value of the invention.

Article 31, therefore, severely limits the margin within which domestic laws can regulate the institution of compulsory licensing. It has been argued (HALEWOOD 1997, 263), however, that this *prima facie* restrictive set of rules must be interpreted in the light of article 30 of TRIPS agreement, which would seem to allow greater margin for countries to enact such laws:

“Members may provide limited exceptions to the exclusive rights conferred by a patent, provided that such exceptions do not unreasonably conflict with a normal exploitation of the patent and do not unreasonably prejudice the legitimate interests of the patent owner, taking account of the legitimate interests of third parties.”

Additional obligations that compulsory licensing may establish, such as the requirement to industrially execute the content of the patent in domestic soil, “local working” provisions, appear (WATAL 2001, 318) to be forbidden according to article 27.1 of the TRIPS agreement, because it is stated that

“[...] patents shall be available and patent rights enjoyable without discrimination as to the place of invention, the field of technology and whether products are imported or locally produced.”

However this is not pacific, as some authors argue (CORREA 2005, 242) that the ambiguous wording of article 27.1, when added to the sustained opposition developing countries show to the interpretation above when it comes to local working provisions, and the absence of an explicit prohibition of such provisions in articles 30, 31 or 8.2, can be interpreted as allowing working obligations provisions. Furthermore, TRIPS agreement provides in its article 2 that members shall comply with some parts of the Paris Convention for the Protection of Industrial Property and that TRIPS agreement does not derogate any provision contained within:

“In respect of Parts II, III and IV of this Agreement, Members shall comply with Articles 1 through 12, and Article 19, of the Paris Convention (1967) [...] Nothing in Parts I to IV of this Agreement shall derogate from existing obligations that Members may have to each other under the Paris Convention”

Therefore, we must pay attention to article 5A of said Convention, which does not establish any limitation with regards to working obligations provisions, and it states that:

“Each country of the Union shall have the right to take legislative measures providing for the grant of compulsory licenses to prevent the abuses which might result from the exercise of the exclusive rights conferred by the patent, for example, failure to work.”

In this regard, WTO’s Canada Panel on Patent Protection of Pharmaceutical Products considered that article 27.1 is applicable to working obligation provisions and therefore to article 30 and 31 of TRIPS agreement, as it said that (WTO 2000, 170):

“[article 30] contain[s] no indication that any exemption from non-discrimination rules is intended [...] [it is an] acknowledged fact that the Article 31 exception for compulsory licences and government use is understood to be subject to the non-discrimination rule of Article 27.1”

An answer to this has been put forward (CORREA 2005, 243), saying that if we are to understand article 27.1 and article 28.1 together, we must conclude that the prohibition of discrimination only applies to discrimination between domestic and foreign products that infringe intellectual property rights, not between all domestic and foreign products.

Even if developing countries were able to make widespread use of compulsory licenses on grounds of non-working intellectual property rights and patentees that refuse to deal (among other anti-competitive practices), the companies upon which these licenses are granted find themselves with the problem of lack of know-how and technical assistance for the patent they are allowed to use (CORREA 2005, 247), even though, arguably, legislation could also force the transmission of those. Another problem arises from article 31’s requirement that a license be withdrawn when the conditions that led to its granting cease to exist: for example if it was granted due to abnormally high prices, when prices normalize, it must be withdrawn. This instability could lead to a lack of incentives for companies to request compulsory licenses

(CORREA 2005, 248). These concerns cast serious doubts on the viability of compulsory licensing as an effective way to technology transfer

#### **4.2.4 Article 66.2**

One of the most important provisions in the TRIPS agreement regarding technology transfer to developing countries is article 66.2. It establishes a positive obligation for developed countries to encourage technology transfer to least developed countries:

“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.”

To follow up on this, and to monitor and ensure compliance, in a Ministerial Declaration of the Doha round (WTO 2011, para.11.2), it was established that:

“[...] 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.”

However, studies (MOON 2008, 9) have found that article 66.2 falls short of its commitment when contrasted with international practice. There is, to begin with, a lack of a clear definition of what technological transfer is and which are the countries obliged to encourage it. Some of these developed countries have never submitted a submission detailing what they have done to encourage technology transfer, and most of them did so irregularly. Furthermore, of all the programmes that were submitted until 2008, only 31% were targeted to least developed countries, as article 66.2 mandates, and of those, about one third did not encourage technological transfer but something else.

All in all, studies have found “found little evidence that TRIPS Article 66.2 has resulted in significant additional incentives beyond business-as-usual for transferring technology to LDC Members” (MOON 2008, 12), and they have also asserted that this monitoring mechanism consisting of periodical submissions detailing incentives to technology transfer programmes is not working as intended. In relation to this, the



creation of a new monitoring mechanism has been proposed, which would provide clear guidelines as to which kinds of programmes are indeed conducive to technology transfer and which not, and would also evaluate the effects of these programs, providing valuable feedback from least developed countries to developed countries.

In this regard, the United Nations Framework Convention on Climate Change is much more explicit and establishes better-defined obligations for developed countries to transfer technology, best summarized in its article 4.5:

“The developed country Parties and other developed Parties included in Annex II shall take all practicable steps to promote, facilitate and finance, as appropriate, the transfer of, or access to, environmentally sound technologies and know-how to other Parties, particularly developing country Parties, to enable them to implement the provisions of the Convention”

## 5 REFORM PROPOSALS

Some of the ideas of reform follow closely the problems diagnosed above. A better definition of concepts such as “technology transfer” and “developed countries” is in order, and also a better system to monitor compliance and perhaps to enforce it too. Giving more room for countries to enact domestic policies to increase technology transfer and technology diffusion is also frequently brought up, even though this, as we’ve seen, could be achieved by a mere change in the interpretation of articles 27.1 and 31 (among others), and so a reform of TRIPS agreement isn’t necessarily needed.

A future reform of the TRIPS agreement could also include some provisions establishing differentiated obligations for developing and developed countries, as some relatively recent treaties, especially international environmental treaties have already, such as the United Nations Framework Convention on Climate Change,<sup>1</sup>:

“All Parties, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances, shall:”

Another mechanism this convention introduces is the linkage between the compliance of developed countries’ obligations towards developing countries in matters of development, and specifically, technological transfer, to the extent to which developing countries will have to fulfill their obligations<sup>2</sup>:

---

<sup>1</sup> United Nations Framework Convention on Climate Change, article 4.1

<sup>2</sup> Idem, article 4.7

“The extent to which developing country Parties will effectively implement their commitments under the Convention will depend on the effective implementation by developed country Parties of their commitments under the Convention related to financial resources and transfer of technology and will take fully into account that economic and social development and poverty eradication are the first and overriding priorities of the developing country Parties.”

The introduction of similar provisions in the TRIPS agreement and their concrete application can be a way forward

## 6 CONCLUSIONS

The technological gap that exists between developed and developing countries is nowadays a grave concern, and it is intimately linked to intellectual property rights systems, and therefore, to TRIPS agreement. However, this gap would exist and be a problem even if there weren't any intellectual property rights international rules. Having this in mind, some authors (UNCTAD 2001, 21) defend that the enforcement of strong intellectual property rights is a way in which foreign direct investment can be encouraged to reach developing countries, and with it, technological transfer. Some others, on the other hand, maintain that the current international intellectual property rights system, with its most visible head being the TRIPS agreement, is not that conducive to tech transfer, and that developing countries and transnational companies benefit from them much more than developing countries do.

This last current argues (ARCHIBUGI and FILIPETTI 2010) (CORREA 2005) that the current international intellectual property rights regime is too strict and too rigid, admitting little flexibility in the form of exceptions and differentiated obligations for developing countries. They call for allowing a greater ability of developing countries to limit intellectual property rights by means of their domestic policies and legislations, for example the enactment of compulsory licensing legislation. It is also criticized that the current system allows little flexibility when it comes to different productive sectors and different stages of the productive processes, which have in turn widely different sensibilities to intellectual property rights protection. Furthermore, it is argued that there has been an excessive amount of focus on the protection via intellectual property rights of information, and that attention should be put into training, capacity building and tacit knowledge, which are areas much less sensible to intellectual property rights protection, whilst being essential for technology transfer.

Changing this regime seems an arduous task, considering the magnitude of interests and powers involved. The denouncing of the WTO treaty, while in theory being possible, would exclude an individual country from the advantages of international free trade, with potentially fatal consequences. All it remains, therefore, is for developing countries and international civil society to lobby for reform of the TRIPS agreement, or at least, to modify the current interpretation that WTO Panels have imposed (for example, in regards to compulsory licensing and article 27.1), or to push for institutional reform, for example, making article 66.2 effective by monitoring and/or enforcing its compliance.

## 7 BIBLIOGRAPHY

---

ARCHIBUGI, D, and A FILIPETTI. "The Globalization of Intellectual Property Rights: Four Learned Lessons and Four Theses." *Global Policy* 1, no. 2 (2010): 138.

BEIER, F. "The significance of the patent system for technical, economic and social progress." *International Review of Industrial Property and Copyright Law*, no. 11 (1980): 563-584.

CORREA, C. *International Public Goods and Transfer of Technology*. Cambridge: Cambridge University Press, 2005.

GLASS, A, and K SAGGI. "International technology transfer and the technology gap." *Journal of Development Economics* 55 (1996): 391.

HALEWOOD, M. *Regulating Patent Holders: Local Working Requirements And Compulsory Licences At International Law*. Toronto: Osgoode Hall, 1997.

HAYDEN, E W. *Technology transfer To East Europe--U.S. Corporate Experience*. Santa Barbara: Praeger, 1976.

HELPMAN, E. "Innovation, Imitation, and Intellectual Property Rights." *Econometrica* 61 (1993): 1247-1280.

HOPPE, M. *Technology Transfer Through Trade*. Milano: Fondazione Eni Enrico Mattei, 2005.

KAYNAK, E. "Transfer of Technology from Developed to Developing Countries: Some Insights From Turkey." *Technology Transfer* (Quorum Books), no. 155 (1985): 155-156.

MANSFIELD, E. *Intellectual Property Protection, Foreign Direct Investment, and Technology Transfer*. Discussion Paper 19, Washington, D.C: International Finance Corporation, 1994.

MANSFIELD, E, and A ROMEO. "Technology transfer to overseas subsidiaries by U.S.-based firms." *Quarterly Journal of Economics*, no. 95 (1980): 737-750.

MASKUS, K. *Intellectual Property Rights and Foreign Direct Investment*. Adelaide: University of Adelaide, 2000.

MASKUS, K, and J REICHMAN. "The Globalization of Private Knowledge Goods and the Privatization of Global Public Goods." *Journal of International Economic Law*, no. 7(2) (2004): 311.

MASKUS, K, and K SAGGI. *International Technology Transfer: An Analysis From The Perspective Of Developing Countries*,. Geneva: WIPO, 2014.

MAY, C, and S SELL. "Forgetting History is Not an Option! Intellectual Property, Public Policy and Economic Development in Context." *DIME Working Papers on Intellectual Property Rights*, no. 28 (2007): 22-23.

—. *Intellectual Property Rights: A Critical History*. London: Lynne Rienner, 2006.

MOON, S. "Does TRIPS Art. 66.2 Encourage Technology Transfer to LDCs?" *ICTSD Policy Brief* (ICTSD), no. 2 (2008).

MOON, S. "Meaningful Technology Transfer to the LDCs: A Proposal for a Monitoring Mechanism for TRIPS Article 66.2." *ICTSD Policy Brief*, no. 9 (2011): 1.

POLANYI, M. *The Tacit Dimension*. New York: Doubleday, 1967.

UNCTAD. *Draft International Code of Conduct on the Transfer of Technology*. Geneva: United Nations Publication, 1985.

UNCTAD. *The Trips Agreement and Developing Countries*. UNCTAD, Geneva: United Nations Publication, 1996.

UNCTAD. *Transfer of technology*. UNCTAD series on international investment agreements, UNCTAD, New York and Geneva: United Nations Publication, 2001, 20.

UNCTAD. *World Investment Report 1999: Foreign Direct Investment and the Challenge of Development*. UNCTAD, Geneva: United Nations publication, 1999, 199-202.

WATAL, J. *Intellectual Property Rights In The Wto And Developing Countries*. The Hague: Kluwer Law International, 2001.

WTO. *Canada – Patent Protection Of Pharmaceutical Products – Report of the Panel*. WTO, 2000.

—. "Implementation-related issues and concerns, Decision of 14 November 2001." Geneva: WTO, 11 14, 2011.