AFRICAN HEALTH POLICIES AND TECHNOLOGY TRANSFER WITHIN THE WTO

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Abstract

There are many World Trade Organisation (WTO) agreements affecting health. However, the Agreement on Trade Related Intellectual Property Rights (TRIPS) and the work done in that forum in regard to access to medicines has a relationship to health. This article looks at the scope for technology transfer in the TRIPS Agreement as it relates to health, how best African countries can take advantage of the provisions, and at what Africa is doing.

Introduction

The TRIPS Agreement has many provisions on technology transfer. The preamble, the principle, and the objectives of the Agreement all acknowledge: the need for the transfer and dissemination of technology; the underlying public policy reasons to protect intellectual property, including developmental and technological objectives; and, that WTO member countries may promote the public interest in sectors important to technological development.

The TRIPS Agreement also requires that developed country Members provide incentives to their companies and institutions to promote and encourage technology transfer to least-developed country (LDC) members to enable them to create sound and viable technological bases. There is also a provision on technical cooperation to facilitate the implementation of the TRIPS Agreement. Under this provision, developed countries are required to provide technical and financial support to developing countries to assist them when they enact intellectual property (IP) laws, and to provide support for them to establish or reinforce their IP offices and agencies, including staff training.

However, the preamble, principle, and objective are qualified by the requirement that measures taken to achieve these goals must be consistent with the provisions of the TRIPS Agreement, balance WTO members countries rights and obligations, and be to the mutual advantage of producers and users of technological knowledge. Moreover, the Agreement is further limited; some of the provisions apply only to LDCs, **not all** developing countries, and the Agreement does not guarantee that the transfer of technology will actually take place. So, for example, companies and holders of IP rights remain free to decide where they will conduct their research and development (R&D) and where they will produce. To this extent, the TRIPS Agreement seems to be more effective in its role as an agreement for the protection of IP rights, rather than in its role as an agreement to facilitate technology transfer. However, this article shows how African countries can make the Agreement achieve its function of transferring technology to their best advantage.

1 Health and technology transfer

…….its easier for poorer countries to import cheap generic medicines under compulsory licensing schemes…..

These provisions have come into the spotlight in relation to health due to work done in the WTO on access to medicines. In November 2001, at their Ministerial Conference, WTO governments adopted a Declaration on the TRIPS Agreement and Public Health. This was followed upon in a decision on 30 August 2003, wherein they agreed new rules to make its easier for poorer countries to import cheap generic medicines under compulsory licensing schemes, provided that these countries are unable to produce the generic medicines themselves. Generic drugs are copies of medicines that are under patent protection. The decision, which also exempted LDC countries from the obligation to protect pharmaceutical patents until 2016, is being applied as a waiver to the TRIPS Agreement until the Agreement is permanently amended.

This waiver is especially important to Africa in the fight

Table 1. HIV estimates for different segments of the population

Adult (15-49) HIV prevalence rate	7.4% (range: 6.9-8.3%)
Adults and children (0-49) living with HIV	25 400 000 (range: 23 400 000-28 400 000)
Women (15-49) living with HIV	13 300 000 (range: 12 400 000-14 900 000)
Adults and children newly infected with HIV in 2004	3 100 000 (range: 2 700 000-3 800 000)
Adults and child deaths due to AIDS in 2004	2 300 000 (range: 2 100 000-2 600 000)

(Source: UN AIDS Regional HIV and AIDS estimates, end 2004)

against diseases such as AIDS and malaria. An estimated one million people in Africa die from malaria each year, and 90% of these deaths occur in sub-Saharan Africa. And according to UN AIDS statistics Sub-Saharan Africa has more than 60% of all people living with HIV even though it has only 10% of the world's population.

The waiver, granted to facilitate the importation of generic drugs, requires that members make detailed notification when they use the system. This notification requires personnel. Hence, the waiver has been criticized as being burdensome, full of red tape and as imposing additional obligations on countries that already have capacity problems. Moreover, no country has used the system.

Hence, Africa must look to the other provisions affirmed in the Doha Declaration on technology transfer and capacity building. This seems to offer a viable long term solution if African countries are to decrease their dependence on external manufacturers of medicines. The 2001 Declaration reaffirmed the commitment by developed countries to provide incentives to companies and institutions to encourage technology transfer to LDCs. Additionally, it acknowledged the desirability of promoting technology transfer and capacity building in the pharmaceutical sector to help poorer countries to overcome their lack of capacity to make/import compulsory licences medicines. WTO members also pledged to pay special attention to the transfer of technology to LDC in the work of the TRIPS Council.

The TRIPS Council is the body in the WTO that monitors the operation of the TRIPS Agreement, and oversees members' compliance with their TRIPS obligations. In addition to its work program on technical cooperation between developed and developing country members, the TRIPS Council reviews each member's law concerning intellectual property and clarify and/or interpret the Agreement. WTO Members also negotiate to improve commitments in the area of intellectual property, and consult with each other on the implementation of their obligations in this forum.

At the time that governments pledged to help poorer countries to make efficient use of compulsory licensed medicines, they also established a working group to examine the relationship between trade and transfer of technology, and to make recommendations on steps to increase flows of technology to developing countries.

Pursuant to its mandate, the working group requested the WTO Secretariat to examine governments' policies on technology transfer. In response, the Secretariat produced the Note "A Taxonomy on Country Experiences on International Technology Transfers," in which it identified some of the major barriers to the acquisition, learning, adaptation and diffusion of technology to developing countries. The factors it identified were: "lack of access to information about the range of technological alternatives; inability to identify the technology best suited to their needs; limited access to finances, inadequate level and quality of higher education and skills; insufficient linkages between universities, research institutes and industry; regulatory constraints; market distortions; and weak and inefficient institutions."

It found that government intervention can be classified into: externalisation-oriented approach (transfer that build domestic capacity by favouring transfers from a multinational company (MNC) to an entity that is not controlled by that enterprise, for example, – in the form of licensing, minority joint ventures, technical cooperation contracts, etc.); internalisation- oriented policy strategy (favour transfers between a parent of a MNC and a foreign affiliate under the ownership and control of the MNC) which can either be a minimal intervention approach or proactive government-driven approach; or a mixed strategy (favours technology flow through all mechanisms - trade, Foreign Direct Investment (FDI) and partnership agreements - and simultaneously builds local technological capabilities to enhance absorptive capacity and technology diffusion within the country).

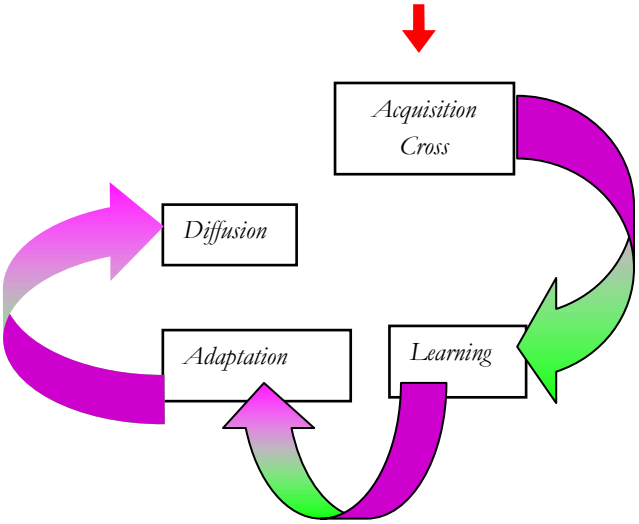
It recommended that governments take account of alternative approaches tailored to their circumstances to acquire technology, but pay attention to factors such as: the type of institution transferring and receiving the technology (government agencies, universities, or private firms); the mechanism through which technology is transferred, including licensing, person-to-person communication, formal literature, trade and FDI; the type of technology, such as product or process-based know-how or scientific knowledge; the characteristics of the market where the technology is destined, including the substitutability with other technology in the domestic market, pre-existence of subsidies or other forms of protections, and degree of competition in the product market; the goal of the transfer policy, i.e. the need to ensure that technology is used and has a positive impact.

40 African countries are members of the WTO, 27 of which are LDCs. Hence the question must be asked whether governments are finding investors for establishing production facilities and whether they are training and retaining health personnel?

2. Why Technology Transfer?

Technology transfer is a multidimensional process through which innovation is disseminated; it is the process by which technical information enters the public domain and becomes generally available for use. It takes place in a 4-step process (see diagram page 25 above).

Health related technology transfer allows access to new medicines, prevents/controls new infections, and enables producers to secure and maintain market position, earning desirable foreign exchange. Technology enters a country through: (1) trade in goods with technological input; (2) contracts between private and/or state enterprises (e.g., technology licensing, i.e. the purchase of distribution or production rights or technological know-how to make use of the rights); (3) FDI by firms with knowledge base asset that brings newer or technology to



a country that did not exist previously; (4) education; (5) imitation, reverse engineering, de-compilation of software, trial and error; (6) literature (including the publication of patent applications, subject to the temporal restrictions on its use).

While one does not pay for transfer via imitation, reverse engineering, de-compilation of software, and trial and error -acquisition by these means is slow and pain staking. Patents are granted provided that the applicant files a disclosure explaining the method or process of his invention. For transfer obtained via the publication or grant of patent applications, it is limited as the information disclosed in patents filed with the patent office is minimal; only to the extent

required, and hence does not contain enough information for the invention to be easily copied, even after patent expiry. Hence this article looks only at African health policies in relation to the other means of acquiring technology and not through transfer via imitation, trial and error and the like.

In addition to the *voluntary* means, there is involuntary transfer where governments issue compulsory licences. However, compulsory licensing is only effective where one already knows how to make the product, it does not allow one to acquire know how in a patent. It is thus good where a country already has the capacity to imitate medicines. This helps to explain why the new rules agreed to by WTO government's on access to medicines are not effective for sustainable health policies. The rules make it easier for poorer countries to import cheap generic medicines under compulsory licensing schemes; they do not make it easier for a country to manufacture. Manufacturing and self-reliance is the only long-term solution to prevent dependence on external pharmaceutical companies.

3. What is Africa doing?

The WTO's Secretariat report's (see above) survey of the literature and case studies of government policies found that nearly all governments have a technology transfer policy. The justification for this is that governments want research to target particular objectives such as industrial diversification or regional development. They also have policies because of market failures (due to the factors such as high transaction cost), which can act as a barrier to the acquisition and diffusion of technology. Moreover, the evidence also showed that policies that provide incentives to cross border flow and at the same time invest in human capital formation can have positive spin off effects, such as increased employment, better educated work forces, and facilitate the further adoption of newer technology.

Assuming that the end goal for African countries is sustainable health policies, they may wish to enhance cross border transfer, increase absorptive capacity, and facilitate technology diffusion in the health sector. With regard to empirical evidence, all African governments must first adopt a technological transfer policy to best take advantage of the provisions in the TRIPS Agreement.

In the context of IP, health related technological transfer often takes place via contracts with pharmaceutical companies. This is because exporters see these agreements as means of appropriating value of investment in R&D in pharmaceuticals. Hence they wish to establish periods of market exclusivity to recoup value. This is generally done through direct exploitation (production and distribution), as well as by licensing and collection of technology royalties. These agreements sometimes have very restrictive provisions. In their policies, governments can analyse transfer agreement as tools to foster development. Bad transfer agreements can have negative effects on a country such as undue or excessive remittances of royalty payments, restrictive business practices, contracting obsolete or internally available technology, dependency on foreign technology drain on a country's balance of payment. Hence, African countries have to implement laws to facilitate competition and to balance IP rights for the produces and consumers, as restraints in international competition hamper technology transfer.

Countries can make it mandatory to have technology transfer agreements recorded before their patent and trademark offices. IP offices, especially those relating to patent and trademark can have the role of establishing and monitoring patenting and trade secret licensing agreements. This is desirable and provides the office with the legal basis to intervene in technology transfer agreements, to allow the deduction sought by the local recipient of technology. They can also analyse negotiated clauses and verify the compliance to fiscal deduction, royalty remittances, and antitrust legislations.

…….TRIPS does not prevent countries from adopting friendly IP health policies but restricts their options. ……..

In the interest of health, they can also implement measures to accelerate and regulate the transfer of technology and establish the best negotiating conditions of utilizing patents. Hence, these offices may compile principles and rules on the drafting and recording of technol-

ogy transfer agreements.

As mentioned in the opening paragraph, technological policies are permissible under the TRIPS Agreement. The Agreement does not prevent African governments from adopting IP health policies, however, it restricts their options. However limited, there are good policies that African governments can adopt.

Admittedly, policy making on technology transfer for health is complex and involves detailed planning and proper execution. Furthermore, the role of IP rights in economic development depends on numerous country specific factors. However, the IP regime adopted by the 40 African WTO members will definitely impact on the mode and effectiveness of transfers. Hence they must ensure that in guaranteeing a certain intellectual property right regime, they adopt one that allows them the most flexibility to take public health measures.

Malawi, with a life expectancy of 39 years, for example, has declared AIDS to be a national emergency and has introduced a policy of providing free, generic antiretrovirals (ARVs) to anyone who needs them. However, as about 20 per cent of the population is thought to have the virus, the government can only provide a basic, three-drug cocktail to HIV-positive patients. Even more limiting in making the medicines available is the lack of/inefficient policy on personnel; the staffing shortage is preventing ARVs from reaching those who need it. A good health related policy should be two-fold (a) training personnel to absorb or diffuse technology, (b) facilitating temporary migration of health workers, students, and technical personnel for the specific purpose of absorbing technology. Malawi staff shortage is in part due to permanent migration. While there are now schemes to top up doctors' salaries, to be effective, the policy must be extended to other health workers like nurses and clinical officers. As a result, while there are about 170,000 people in Malawi in need of ARVs, only 23,000 of them receive medication due to funding and staffing problems. In technological transfer negotiations with the WTO, Malawi can, for example, seek funds to train person and to facilitate technological transfer, or request grants so that their graduates be trained (temporary transfer) to work in the health sector.

Kenya is another African country that has taken a stance in relation to IP and health. In June 2002, to facilitate the importation of a wider choice of cheap ARVs as per the waiver, the Kenyan parliament reversed an amendment to the country's Industrial Property Act that blocked commercial importation of 'generic' medicines into Kenya. Under their July 2001 intellectual-property law it was it possible to import medicines from anywhere in the world. This provision was however changed to state instead that potential importers or producers of generics must seek explicit permission from the patent holder. Due to public pressure this was reversed as it was actually preventing transfer because it is against the patent holder's interest to grant such permission. The new provision is now is in line with the WTO waiver, permitting countries to make efficient use of cheaper generics imports in cases of national emergencies, like the AIDS pandemic in Kenya.

Kenya's amendment is an adoption of an international exhaustion regime. The TRIPS Agreement has always provided a choice to adopt a national or an international exhaustion regime. If a country adopts an international exhaustion system, the patent holder cannot block imports of medicines embodying its patent. This means that a country can import AIDS medicines sold cheaper in another country ("parallel importation"). However, if a country follows national exhaustion, the holder can block parallel imports, preventing importation of cheaper medicines from another country. This decision to adopt a principle of international exhaustion, however, can still be undermined by clauses in licensing agreements that prohibit the licensee from exporting goods to countries with international exhaustion regime. Such clauses should be prohibited as a matter of law, since they exclude competition. Hence, each African country must have a policy on the issue of exhaustion and on competition.

This policy seems to be backed by actions at the international level. In April 2002, Kenya, Mauritius, Tanzania, Uganda, and Zimbabwe along with other countries proposed analysis as well specific issues that they would like to have examined in the Working Group on Trade and Transfer of Technology in order to facilitate technological cooperation.

However, like Malawi, Kenya does not seem to have a holistic regime for technological transfer. According to a 2004 World Intellectual Property Organization WIPO commissioned audit, Kenya is ahead of most African countries in terms of legal framework and policies on IP rights. It has three national offices in charge of IP: Kenya Industrial Property Institute (KIPI; a semi-autonomous department under the Ministry of Trade and Industry), a Copyright Office, and the Plant Breeders Rights Office. However, even with an adequate legal framework, the level of public awareness on IP in Kenya is low. Many people in government, industries, universities and R&D institutions cannot differentiate IP rights and only a few institutions have IP protection provisions in their agreements with donors, suppliers and research collaborators, and even fewer institutions have filed IP application or have commercialised IP rights. The report also showed that while there are centres for research on IP in industrialised countries e.g. Max–Planck Institute in Munich, Franklin Pierce Law Centre in the US, the Canadian Intellectual Property Centre, the Queen Mary Intellectual Property Research Institute, as well as the Korean International Intellectual Property Institute, there is no such institute in Africa.

Conclusion

Even though the TRIPS Agreement seems best suited to protect IP rights, there are options for African countries on health related technological transfer. IP regimes

must ensure that licensing agreements do not contain clauses that are detrimental to the interests of the licensee or restrict trade opportunities when it comes to the marketing of licensed products on international markets. It must also include policies on competition to prevent and correct market-related abuses, to ensure that technical information, i.e. private appropriation of technology, does not impose unreasonable social welfare costs, and that it enters the public domain appropriately. The end process for Africa has to be local innovation and sustainable health policies.

Endnotes

Teisha Öberg is a lawyer with specialization in trade issues.

1. See the Decision of 30 August 2003, Implementation of paragraph 6 of the Doha Declaration on the TRIPS Agreement & public health, WTO Document WT/L/540. See also the Doha Declaration on the TRIPs Agreement and Public Health of 14 December 2001, WTO Document WT/MIN(01)/DEC/2 Available on the WTO Website. ADDRESS?? http://www.wto.org/english/tratop_e/trips_e/implem_para6_e.htm and http://www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_trips_e.htm respectively.
2. See http://www.theglobalfund.org/en/in_action/events/africamalariaday/2004/malaria for Global Fund statistics on Malaria.
3. Paragraph 37 of the Ministerial Declaration itself (adopted in November 2001- WT/MIN(01)/DEC/1.
4. WTO Working Group on Trade and Transfer of Technology WT/WGTTT/W/3, 11 November 2002
5. A Taxonomy on Country Experiences on International Technology Transfers - Note by the Secretariat.
6. Ibid.
7. http://news.independent.co.uk/world/africa/article312974.ece.
8. The Kenya Coalition for Access to Essential Medicines Nairobi, 15 August 2002.
9. Challenges Faced by Developing Countries in teaching and Conducting Research on Intellectual Property By Prof. Tom P.M. Ogada, at Moi University.