

## Protection of Intellectual Property Rights in the World Trading System: the TRIPS Agreement and Developing Countries

- *The Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) is one of the aspects of the world trading system on which the views of the industrialized and developing countries are sharply divided. While the industrialized countries celebrate the Agreement as a breakthrough in the global protection of intellectual property, the developing countries fear that rising prices of knowledge-intensive products and impeded access to know-how will delay their technological catching-up process.*
- *Intellectual property rights are an important means of promoting technological progress because they give inventors monopoly rights in their innovations for a limited period. This has the disadvantage of preventing the socially desirable earliest possible dissemination of knowledge.*
- *The TRIPS Agreement is leading to the international approximation of legislation on the protection of intellectual property at a relatively high level and to a significant increase in protection in most developing countries. The less developed countries will suffer welfare losses; more advanced developing countries may also benefit from stronger intellectual property rights because of increasing technology transfer and domestic innovation.*
- *Neither the historical experience of today's industrialized countries nor economic theory endorse every aspect of the TRIPS Agreement. In patent law in particular there is room for development-friendly reforms. The flexibility allowed by the Agreement should be retained and, where appropriate, widened. At all events, the industrialized countries must refrain from using bilateral pressure to induce developing countries to afford even greater protection to intellectual property than that required by the TRIPS Agreement.*
- *The TRIPS Agreement raises major problems in developing countries when little or no advantage is taken of existing flexibility. Many developing countries need help with the incorporation of the requirements of the Agreement into national legislation with appropriate account taken of their economic and social needs.*
- *Apart from participating in the debates in the World Trade Organization, industrialized countries should increase their efforts to make relevant know-how and technology available to developing countries: targeted incentives may promote the transfer of technology to developing countries; public research in areas of relevance to developing countries should again be stepped up; public research institutions should be granted special authorization to use patented products and processes.*

### Contents of the TRIPS Agreement

The Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) forms the third pillar of the World Trade Organization (WTO) alongside the agreements on goods and services. The rules it contains cover three aspects in particular: it sets relatively high standards for the protection of intellectual property in what are today the most important areas in this respect; it contains detailed procedural guidelines aimed at ensuring rights are actually enforced; and it requires the WTO's member countries to submit any disputes to the WTO settlement procedure. All in all, the TRIPS Agreement thus leads to an international approximation of legislation on the protection of intellectual property at a relatively high level and to a significant increase in protection in most developing countries.

The level of protection afforded to intellectual property is determined by the rules on the scope of protection, exemptions and the enforcement of protection. The scope of the TRIPS Agreement is considerable: with patents, copyright protection, trade marks, geographical indications, industrial designs, layout-designs of integrated circuits and undisclosed information, it

covers the most important spheres of intellectual property. The protection standards are high and in many cases guided by the level in the industrialized countries, although formally they are no more than minimum standards. The exemptions from protection are worded in fairly vague terms and accompanied by numerous conditions. It becomes more difficult, for example, to issue compulsory licences, which, in the event of abuse, may enable an invention to be economically exploited against the will of the holder of the rights. On the other hand, the procedural guidelines and the dispute settlement mechanism have the effect of requiring the member countries to ensure that rights are actually enforced. In general, the Agreement thus places greater emphasis on the protection of intellectual property than on the limits to such protection.

The industrialized and developing countries are particularly at odds over the rules on patent rights. The Agreement provides for very wide-ranging protection of patents on products and production processes in all areas of technology for at least twenty years. However, limited exemptions from patentability are possible. They concern (i) the protection of public order, in-

cluding health protection, (ii) medical procedures and (iii) plants and animals, with the exception of microorganisms and plant varieties.

Contrary to what is sometimes assumed, the TRIPS Agreement calls for the approximation of legislation, but not for the complete international harmonization of protection. The protection of intellectual property rights continues to be territorially based, and countries retain a degree of flexibility in incorporating the Agreement into national law. This latitude stems from three factors: first, the Agreement provides for transitional periods for developing countries, continuing until 2006 in the case of the least developed countries (LDCs); second, various of its provisions allow explicit latitude; and third, implicit latitude exists because certain parts of the Agreement are in need of and open to interpretation.

### **Developing countries' criticisms of the TRIPS Agreement**

Despite this flexibility, the developing countries have criticized the TRIPS Agreement from the outset for unduly restricting their domestic economic policies. They refused to negotiate on the protection of intellectual property rights in the WTO on the grounds that this had nothing to do with market access or international trade. In the economic sphere they were afraid that the transfer of technology to their countries would be slowed down: knowledge-intensive goods would become more expensive, the protection of rights would primarily benefit multinational corporations, and the world would become even more technologically divided. In the end, however, they agreed to the TRIPS Agreement in 1994 because it brought them advantages in other areas of the WTO (especially with regard to access to agricultural and textile markets) as part of a package deal.

### **The pharmaceutical sector and the TRIPS Agreement**

The pharmaceutical sector is seen as a typical example of the economic and ethical tensions associated with the protection of intellectual property rights. There is a conflict between short- and long-term objectives in this sector: on the one hand, the introduction of patents on pharmaceutical products will raise the prices of drugs in many developing countries – by as much as 90% according to some estimates. This will be a serious burden on health care for the poor, hampering the supply of AIDS drugs, for example. On the other hand, it is in society's interest to use incentives of the kind provided by patent law to encourage the development of new drugs and vaccines.

From the developing countries' point of view, there is an important third aspect to be considered: many countries, including today's industrialized nations, have supported the development of domestic pharmaceutical industries by making the imitation of drugs possible. Such countries as India have provided for patents on pharmaceutical processes (but not on pharmaceutical products) to allow the local industry to benefit from learning-by-doing. Many enterprises now about to become internationally competitive have profited from this. A strategy of this kind will be precluded by the TRIPS Agreement in the future.

Today no developing country publicly opposes the protection of intellectual property rights. Although most developing countries continue to share the view that they have been "taken for a ride" by the TRIPS Agreement, the criticism has become more discriminating. It is directed primarily at provisions of patent law, and especially at two sensitive sectors: pharmaceuticals and biotechnology.

### **Obligation to patent genes and plant varieties?**

Article 27(3)(b) is among the most controversial provisions of the TRIPS Agreement. It specifies which biotechnological inventions must be patented and which are exempted from this requirement. Microorganisms and non-biological and microbiological methods of breeding plants and animals must be patented, whereas plants and animals and biological breeding methods need not be. For plant varieties provision must be made for effective *sui generis* protection if a country decides against patenting.

An obligation to patent genetic resources cannot be deduced from the wording of Article 27. Developing countries may classify genes as discoveries, which, unlike inventions, need not be patented. However, many developing countries point to the problem of distinguishing the various categories referred to above, which gives rise to legal uncertainties. Nor has it yet been clarified when the protection of a plant variety can be considered "effective" and so accepted by the WTO as an alternative to a patent.

Another criticism is that little time is allowed for the implementation of the Agreement in countries with insufficient previous experience of intellectual property rights. The TRIPS Agreement poses major challenges for these countries, since they have to develop a set of rules that is attuned to their specific needs while complying with the requirements of the Agreement.

The developing countries criticize the industrialized countries for failing to honour the obligations imposed on them by the Agreement to promote technology transfer to developing countries. The Agreement does, after all, define a number of obligations, although they have not been operationalized. This makes it relatively easy for the industrialized countries to shirk their responsibility. The developing countries see this as an example of the way in which the TRIPS Agreement is not only biased towards the industrialized countries in the benefits it brings but is also being implemented to the developing countries' disadvantage.

The developing countries also fear that the latitude still allowed by the TRIPS Agreement will be limited by the industrialized countries as time passes. This may be achieved through renegotiation, restrictive judgments in dispute settlement procedures or through bilateral pressure. Initial signs of such pressure are already discernible, as the USA and EU endeavour to establish a "TRIPS-plus" regime in bilateral trade agreements with many developing countries (providing, for example, for very strict protection of species and high barriers to the issue of compulsory licences).

## Assessment of the TRIPS Agreement from an economic angle

The TRIPS Agreement should be viewed critically because certain of its protection standards lead to the approximation of legislation at a level which is not economically justified. The flexibility that nation states enjoy is too severely restricted in some respects, especially where patent law is concerned. This criticism is all the more valid if the Agreement is interpreted more restrictively in the future than was initially expected.

From an economic angle there are sound arguments for protecting intellectual property rights. Intellectual property rights enable researchers and enterprises to recoup their risky investments in research and development through the exclusive right to market the new product. This “reward” for the inventor does not have a primarily moral justification, but is intended to speed up technological progress and so eventually to benefit the economic prosperity of society as a whole. Intellectual property rights help to improve an economy’s dynamic efficiency.

This instrument has its price, however: static efficiency is reduced because the rapid dissemination of existing know-how is impeded. Intellectual property rights must permit a compromise between the two legitimate objectives to be negotiated in the democratic process. In the industrialized countries it was found that the arguments for increasingly strict protection became stronger in the course of economic development. In other words, economically weaker countries did less to protect intellectual property until they had sufficient innovation potential and their business community’s self-interest in the enforcement of intellectual property rights therefore increased.

### Software protection

Software is a knowledge-intensive product that is easy to copy and duplicate. Software developers therefore need protection for their intellectual property. The TRIPS Agreement provides copyright protection for software (Article 10), as is common practice in the industrialized countries. However, the Agreement also prescribes patent protection for inventions *in all fields of technology* (Article 27). This gives rise to legal uncertainty with major implications.

For the tendency in the industrialized countries, and especially the USA, is to grant patent protection for software. In the future developing countries may come under pressure to follow the same course. As patents also extend to the idea behind the product, the protection is far greater than under copyright law, and follow-up innovations may be impeded. The competitive position of young software enterprises would also be weakened, since newly developed products usually include (patented) elements of older products. This would raise production costs for subsequent inventors owing to licence fees and transaction costs in general.

Besides historical experience, the recent economic theory argues against the global harmonization of protection standards. Most North-South models come to the conclusion that any global expansion of protection will lead to welfare losses in the developing countries and welfare gains in the industrialized countries. To qualify this statement, LDCs in particular will suffer where higher protection standards are applied,

and this for two reasons: first, dynamic incentives at domestic level have little impact owing to the absence of a local innovation base, and second, global innovations are not appreciably influenced owing to the small size of markets. The LDCs will nonetheless have to pay static costs because of the higher prices of know-how.

Advanced developing countries, on the other hand, may benefit even in the medium term, since they have domestic innovation potential. Furthermore, better protected intellectual property rights are likely to facilitate the transfer of state-of-the-art technology through foreign direct investment or under licensing agreements.

In the agricultural sector the required protection of biotechnological products may pose serious problems if the Agreement is not properly implemented. Excessive protection of new plant varieties would make it more difficult for farmers to use crops as seed. Obstructing access to phytogenetic resources would also be ecologically and economically questionable, as it might result in a reduction of biodiversity.

## Proposals for the reform of the TRIPS Agreement

Since 1999 numerous proposals for the reform of the TRIPS Agreement have been put forward by the developing countries in the WTO. They emerged during the run-up to the WTO ministerial conference in Seattle and the “review procedures” built into the Agreement. The gist of the proposals is that the TRIPS Agreement, though accepted as a *fait accompli*, should be made more “development-friendly”.

The industrialized countries initially refused even to discuss these proposals, their position being that the review process extends only to the state of implementation and not to the contents of the Agreement. In the meantime, however, the EU has shifted its position towards that of the infuriated developing countries and is demonstrating growing flexibility in some respects. The USA is also beginning to discuss the substance, although it still shows little sign of any willingness to compromise. The following proposals from the developing countries are well founded in terms of economic theory:

- The latitude currently allowed by Article 27(3)(b) (see the box headed “Obligation to patent genes and plant varieties?”) as regards the patenting of natural resources should be retained and, where appropriate, widened. To make it more difficult for certain biotechnology enterprises to acquire genetic resources or traditional know-how without paying for them (“biopiracy”), the Agreement should be amended to require that patent applications include references to the prior informed consent of the source country and to a benefit-sharing agreement. Both already form part of the Convention on Biological Diversity (CBD), which has been signed by 177 states. The Secretariat of the CBD should be granted observer status on the WTO’s TRIPS Council to ensure coherence between the two agreements.
- Industrialized countries should honour their obligation under the Agreement to promote the transfer of technology to developing countries by pro-

viding suitable incentives for research institutions and private enterprises. Such incentives include targeted subsidies, premiums and tax concessions. LDCs in particular are otherwise in danger of becoming even more remote from technological progress.

- Industrialized countries should refrain from interpreting the text of the Agreement any more restrictively than necessary. There should be no obligation to patent software. The decision whether parallel imports (imports of a legal licensee's patented products from a third country) are permitted or prohibited must continue to be at countries' discretion. Developing countries must not be deterred by bilateral pressure from introducing rules on compulsory licences.

### Implications for development policy

As has become clear above, the effects of the TRIPS Agreement very much depend on how it is implemented by the various countries. Although the Agreement does not comply with the recommendations of economic theory, it leaves nation states some scope for alleviating negative effects and providing positive incentives. Besides calling for the judicious reforms of the Agreement outlined above, development policy should therefore focus on the accompanying measures referred to in the following, which in many respects have more immediate implications for the people concerned than the Agreement itself.

Most developing countries need additional measures to help them to incorporate the TRIPS Agreement into national law. In many cases the transitional periods will also have to be extended. Advantage should continue to be taken of the legal competence of the World Intellectual Property Organization (WIPO), which, under a cooperation agreement with the WTO, has assumed the task of advising the developing countries. However, a development policy component should be added to WIPO's assistance, since it is essential that a country's economic and social interests be taken into account when the TRIPS Agreement is incorporated into its national law. To this end, there should be close cooperation between WIPO and UNCTAD (United Nations Conference on Trade and Development), since the developing countries accept UNCTAD as the guardian of their economic interests.

The industrialized countries should play their part in easing the pressure of the specific problems affecting the pharmaceutical sector. Public medical research into diseases that pose particular problems in developing countries (e.g. AIDS, tuberculosis and malaria) should be stepped up. Cooperation with private pharmaceutical companies, possibly backed by guarantees to purchase newly developed, patented drugs, may also be a worthwhile approach. The tough stance taken by the industrialized countries in defending drug patents is ethically and economically acceptable only if complemented by such measures.

Public research funds must also be increased in other sectors. Public research remains, after all, the most important area of state action to develop additional know-how for developing countries. The negative view taken of the TRIPS Agreement by large sections of civil society also stems from the fact that the strengthening of private intellectual property rights is accompanied by a reduction of public funds for development-oriented research. Consequently, the incentives to create new know-how are guided by private profit interests.

Although in principle this cannot be criticized in a market economy, it has to be said that research is being neglected in areas in which pronounced social need coincides with low private purchasing power – the very situation in which the poor in developing countries find themselves. From the economic angle there is a need for action because of the existence of external effects, i.e. the social rates of return are far higher than the private rates. Public health, food security and environmental sustainability are of immediate benefit not only to those directly concerned but ultimately to the world as a whole. As with multilateral environmental agreements, there is therefore a joint, but differentiated responsibility to create know-how in these areas.

Public research should also be backed by measures to ensure that intellectual property rights do not impede the work of public research institutes. International agricultural and pharmaceutical research institutes operating on a non-profit basis should be granted exemptions to enable them freely to use important patented processes or basic materials, so that the development of products for developing countries is not hampered.

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### Further literature

Correa, C.M. (2000): Intellectual Property Rights, the WTO and Developing Countries. The TRIPS Agreement and Policy Options, Third World Network, London etc.

Liebig, K. (2001): Geistige Eigentumsrechte: Motor oder Bremse wirtschaftlicher Entwicklung? Entwicklungsländer und das TRIPS-Abkommen, GDI, Bonn

Maskus, K.E. (2000): Intellectual Property Rights in the Global Economy, Institute for International Economics, Washington D.C.

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