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The Efficacy of TRIPS: Incentives, Capacity and Threats

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There is a major split between developed and developing countries over the protection of the patents in pharmaceuticals in the TRIPS. This dispute is symptomatic of the difficulties of incorporating a non-trade issue into a trade organization. Incentives and threats are examined in the context of the TRIPS. It is concluded that developing countries have no direct incentives to protect intellectual property, that the threat of trade actions is unlikely to induce compliance and that the use of indirect incentives is discredited and will fail to achieve its objective over the long run. Successful protection of intellectual property in developing countries will require a way to provide them with a direct incentive to enforce such protection.

Keywords: enforcement, incentives, intellectual property, knowledge economy, threats, TRIPS

I see lots of hard work remains to be done in TRIPS, especially to bring Members' distant positions closer.

WTO Director General Supachai Panitchpakdi¹

... we are encouraging manufacturers able to make available medicines at lower prices for developing countries to do so. Here again, we have suggested to offer a new legal tool at the EU level to ensure that the medicines exported under it do reach the countries for which they are intended and are not exported back to the EU. But let's not forget the people who can't afford medicines, however cheap they are. They too are entitled to treatment. Medicines are not a luxury. Let's join forces in a coalition of the willing to make sure that those who need them get them.

EU Trade Commissioner Pascal Lamy²

We support treating pharmaceutical patent rights in a flexible fashion to help poor countries facing severe public health crises. However, we also believe that it is unwise for the on going negotiations in Geneva to move in a direction that threatens to erode the central protections of the TRIPS provisions as related to pharmaceutical patents throughout the developing world.

United States Senators Charles E. Grassley and Jeff Bingaman³

Sadly, while HIV/AIDS has taken its greatest toll in sub-Saharan Africa, most of the region's representatives to Geneva are not attending meetings related to this issue or engaging in the debate.

Assistant United States Trade Representative for Africa Rosa Whitaker⁴

Introduction

Had the anti-globalization forces been given free rein to devise an issue with which to discredit the international trading system, they could not have invented a better one than the current debate over the protection of pharmaceuticals in developing countries. It pits large transnational pharmaceutical companies backed by governments in the United States, the European Union and other major developed countries against impoverished populations devastated by epidemics of medieval proportions concentrated in some of the world's poorest and most dysfunctional countries. While it was readily agreed by developed-country governments at the Doha World Trade Organization (WTO) Ministerial Meeting in 2001 that a relaxation of the

strict Agreement on Trade-Related Aspects of Intellectual Property (TRIPS) protocols should be allowed in public health emergencies, the devil is in the details and the means to implement the Doha Declaration on the TRIPS and Public Health have proved elusive (WTO, 2002).

The conflict over pharmaceuticals, however, is symptomatic of the tension over the TRIPS that permeates relations among developed and developing countries and spills over into other aspects of their relations at the WTO. There are other significant issues that the Council for TRIPS is attempting to deal with, which are tangential to international trade, but exacerbate tensions between developing countries and developed countries. These include: the patenting of living organisms, which directly involves the TRIPS in the controversy over biotechnology (Kerr and Yampoin, 2000; Gaisford et al., 2001); the protection of traditional knowledge and folklore (Gaisford and Kerr, 2002; Isaac and Kerr, 2002); the expansion of provisions for geographic indicators⁵; issues relating to intellectual property in electronic commerce; and assistance in developing the capacity to create intellectual property in developing countries. None of these issues has an obvious solution given the high potential stakes for developed countries, the small benefits likely to accrue to developing countries and their limited enforcement capacity.

Inherent Contradictions

Knowledge has characteristics attributable to public goods. Knowledge is non-rivalrous in use and non-excludable. The former means that the use of knowledge by one individual does not preclude its use by others. The latter means that once knowledge is in the public domain, it is almost impossible to privately prevent others from acquiring and using it. As a result, it is virtually impossible for the creator of knowledge to appropriate any benefits arising from its existence. In many cases goods and services with these characteristics are provided by the state – hence the term *public goods*.

Of course, knowledge is not costless to create. In the absence of the ability to appropriate any benefits arising from the creation of knowledge, few would incur the costs to create it. This would lead to suboptimal rates of knowledge creation for society. One solution is for governments to subsidise the creation of knowledge and make it freely available as a public good. Much basic research is provided in this way. The development of new knowledge is, however, risky because it is not possible to ensure that research expenditures will bring forth new knowledge. Governments have no particular advantage in being able to pick winners when allocating research funds

(Davies and Kerr, 1997). The private sector may be willing to share the risks associated with knowledge creation and may be more adept at picking winners. Thus, it has been long recognized in modern market economies that the private sector has a role in knowledge creation. To facilitate this role, however, it was necessary to alter the public-good characteristics of knowledge. This was done through the creation of artificial property rights for intellectual endeavours through government sanction and enforcement. These property rights take a number of forms – patents, copyrights, trademarks and so on – but have the common characteristic that they endow the owner of the property rights with a (temporary) monopoly. This is the source of much of the difficulty related to the TRIPS.

There is an explicit trade-off inherent in the granting of intellectual property rights through monopoly. It is well known that monopolists restrict supply and charge a higher price than would be the case under competition. Thus, monopolies lead to the underprovision of goods or services derived from the creation of knowledge. This underprovision is temporary, determined by the period for which the monopoly is granted, and often carries with it other obligations (e.g., the requirement of full disclosure of the knowledge as part of the patenting process).⁶ This underprovision is accepted as the cost of securing the creation of new knowledge and the increases in societal welfare that it brings (Gaisford et al., 2001).

The sanctioning of monopolies also means, however, that there is no direct relationship between the cost of creating new knowledge and the returns that can be secured from the marketplace. Thus, it is possible that firms that create new knowledge may reap very high returns from the knowledge that they develop.⁷ This may appear particularly true when costs are considered in relation to the development of an individual product. In reality, firms involved in knowledge creation must reap sufficient returns from their *winners* to offset the losses incurred in developing failures if they are to survive. Still, there is no direct relationship between total cost (production plus research and development) and total revenue. Large supernormal profits are possible.

While the trade-off between knowledge creation and monopoly distortion has been accepted in most developed countries for a considerable period, this has not been true in developing countries. They have tended to focus on the high monopoly prices and monopoly profits reaped by foreign corporations. As developing countries produced so little intellectual property given their levels of education and dearth of research infrastructure and capacity, they saw few benefits.⁸ As a result, they have been willing to *free ride* on the creation of knowledge in developed countries. They

had long-standing policies of choosing not to protect intellectual property in the pre-TRIPS era. While firms in developed countries may have been frustrated by the absence of multinational protection of their intellectual property, their governments accepted the *status quo*. The question is, what caused the changes that culminated in the TRIPS being incorporated into the new WTO at the end of the Uruguay Round in 1994?

The proportion of the value of goods comprised of intellectual property has been rising at a rapid rate over the last few decades. This rise is largely the result of the widespread dissemination of computer technology⁹ as well as the low-cost dissemination of information that is embodied in the internet and, latterly, the ability to use and commercialize genetic information; the foundations of what is loosely termed the *knowledge economy*. The governments of modern market economies have accepted the knowledge economy as the key to their future relative prosperity and have invested heavily in attempting to ensure that, individually, they will be among its leaders.

Not only has the proportion of the value of goods comprised of intellectual property been rising rapidly, but the rate of knowledge creation has been increasing. This means that the life cycle of any advancement in knowledge is shortening. In turn, this means that to increase the probability of a positive return on investment in knowledge creation, firms making those investments need access to the widest possible markets, including international markets. Thus, they need the protection of their intellectual property extended to a larger set of countries. At the same time as the pressure to extend international protection of intellectual property arose, the technical capacity of some developing countries to engage in intellectual property piracy through practices such as reverse engineering increased, particularly in Asia (Yampoin and Kerr, 1998). The existing international arrangements for the international protection of intellectual property, primarily the World Intellectual Property Organization (WIPO) and the conventions it administers, had no means of encouraging developing countries to participate and no mechanism to ensure that commitments were complied with.

Seeing their relative economic prosperity being tied to being leaders in the knowledge economy, developed countries had no incentive to induce developing countries to protect intellectual property by providing the means by which they would benefit from it. In essence, they would be creating their own future rivals. This is an inherent contradiction in developed countries' policy toward the protection of intellectual property. They protect intellectual property and accept the costs associated

with the artificial monopoly because they benefit from knowledge creation, not simply because society's welfare increases in the short run but because their firms can create additional knowledge in the future. To foster those same benefits in developing countries through capacity building and the funding of the development of human capital and research infrastructure – basically to recreate the tried and true incentives that motivate protection of intellectual property in their own country – has not garnered much support because it is perceived as creating rivals in the knowledge creation race. An alternative to positive incentives was sought.

The TRIPS Threat

One alternative to positive incentives is a threat. Incorporating protection of intellectual property, which is not really a trade issue,¹⁰ into the WTO during the Uruguay Round provided the coercive mechanism that was missing in the WIPO. The coercive mechanism is the imposition of trade sanctions for violations of TRIPS commitments.¹¹ The GATT 1947 was redesigned to facilitate the protection of intellectual property. While the form of the institutional architecture of the new WTO was not entirely based on facilitating the incorporation of the TRIPS,¹² it was a major influence.

To make the TRIPS effective, developing countries had to be part of the agreement. In the new WTO, to be a member of the GATT and receive the benefits it provided for the trade in goods, one had to also accept TRIPS disciplines¹³ – there could be no opting out. If a country did not want to accept the TRIPS it had to withdraw from the WTO. Each of the agreements (TRIPS, GATS and GATT) is administered by an individual council under the overall auspices of the WTO. The WTO also directly administers a unified dispute settlement system for all three agreements. The unified disputes system explicitly allows for cross-agreement retaliation. This means that when a country is found to be in violation of its TRIPS commitments, the country whose intellectual property has not been protected can impose trade restrictions under GATT on imports of goods from the country found to be in violation of its TRIPS commitments. This cross-agreement retaliation was necessary because tit for tat withdrawal of intellectual property protection under the TRIPS would not work in the case where the offending country did not produce any intellectual property. As the GATT was already mandated to impose trade sanctions, cross-agreement retaliation was an easier route to take than having trade sanctions imposed directly in the TRIPS.¹⁴

Finally, a binding dispute mechanism was required. The GATT 1947 had a consensus-based dispute settlement system whereby all members, including the accused country, had to agree to the establishment of a panel and acceptance of a panel's report. The WTO dispute system allows a single country to request a panel and the panel's rulings are binding.¹⁵ If the accused country chooses to ignore the panel's ruling then the aggrieved country is allowed to seek compensation or, if that cannot be agreed, to retaliate.

The TRIPS commitments are relatively straightforward. Countries agree to put domestic legislation in place that conforms to international conventions;¹⁶ that gives equal protection to domestic and foreign holders of intellectual property; that is transparent; that allows for due process; and that is accessible to all (and foreign parties in particular). Countries also agree that resources will be committed to enforcement.¹⁷ Developed countries had to comply within one year of the TRIPS coming into force and developing countries were given five years to comply, while least developed countries were given eleven years. For the most part, countries have put the appropriate legislation in place. The efficacy with which they are enforcing the legislation is not yet clear.

The TRIPS/WTO system was designed to facilitate coercion. The coercive mechanism, however, remains almost untested as few cases have been brought to WTO panels. In part, this is because there was a moratorium on cases over the phase-in period for developing and least developed countries.¹⁸ This brings up the question of the credibility of the trade threat. The existing theoretical research suggests, over a wide range of assumptions, that the size of the trade penalty will not be sufficient to induce countries to enforce intellectual property rights (Gaisford et al., 2002; Yampoin and Kerr, 1998).¹⁹ This is because the nullification of benefits to the economy from piracy plus the enforcement costs are larger than the costs imposed by trade retaliation.²⁰ When one factors in the probabilities that a failure to enforce will be detected, that a case will be mounted at the WTO, that a case will be won and that trade measures will be applied, the incentives to actively enforce TRIPS commitments appears small.

Further, little is known about the cost of enforcement in developing countries (Yampoin and Kerr, 2002). One suspects that effective enforcement will require considerable resources. While some common forms of intellectual property piracy are relatively easy to detect – violation of copyright for film and music and trademarks in the form of fake watches and blue jeans – others relating to industrial processes, computer software, active ingredients in pharmaceuticals and gene sequencing – are

not. While the losses from copyright and trademark piracy can be substantial, it is piracy related to patents and reverse engineering of industrial processes that threaten the knowledge economy strategies of firms and developed-country governments. It can be difficult to identify a violation of these rights and to make the link to the person(s) involved. A highly trained and sophisticated policing system is required. An intelligent police force, however, is not sufficient for effectively combating intellectual property rights infringements. Modern technology and extensive training are key to controlling intellectual property rights infringements. These are not characteristics of police forces in developing countries.

The police force is not the only arm of enforcement that must ensure intellectual property rights are protected. Investigators, lawyers and judges play an important role in convicting those who infringe on other's intellectual property rights. Investigators may not be willing to devote sufficient time to collecting evidence for a case dealing with intellectual property rights. Other crimes seem more *criminal* and therefore the investigator may unknowingly devote more time to those cases. As with the police force, investigators are also likely to be inexperienced in the area of intellectual property and lack training in the methodologies used to investigate such cases.

Inexperience is not just limited to the police that carry out the preliminary aspects of enforcement and the investigators who collect evidence when an infringement occurs. Lawyers and judges in the legal system will also require training, and a pool of independent experts to draw information from is required when dealing with intellectual property rights cases.

If costs of enforcement are high, governments in developing countries are likely to want to use their scarce resources elsewhere. It is hard to see why protecting the intellectual property of foreigners would be a high priority for developing-country governments, particularly if the costs associated with the imposition of trade barriers are not a significant deterrent. Their existing capacity would not allow for effective enforcement and they have little incentive to make the necessary investments in capacity building. The Office of the United States Trade Representative recently indicated that it had concerns relating to intellectual property protection and enforcement in forty-five developing countries.

Indirect Incentives

To get the developing countries to agree to the TRIPS during the Uruguay Round, developed countries provided indirect incentives – that is, incentives not directly arising from the protection of intellectual property. They offered developing countries

concessions in the areas of improved access to developed-country markets for agricultural goods and textiles, among others. Thus, developing countries did not buy into the TRIPS, they were induced into reluctantly accepting it through the provision of indirect incentives. Having agreed to the new WTO institutional architecture, including the TRIPS, the developing countries found that the incentives they had been promised were largely illusory. Through a combination of dirty tariffication, tariff-rate quota establishment and non-tariff barriers, developed countries have been able to continue to deny market access to agricultural products from developing countries (Meilke, 2000), while general *foot dragging* combined with the strategic use of contingency protection measures is taking place in textiles. Hence, the row over *implementation* that arose at the WTO Ministerial Meeting in Seattle was directly related to the TRIPS.

Given that developing countries have no direct stake in the TRIPS, that the threat of trade sanctions appears weak, and that they did not receive the promised indirect benefits that were offered as incentives, it is probably not surprising that they are attempting to reduce the efficacy of the TRIPS even further. The difficult negotiations over pharmaceuticals are the thin edge of the wedge. Now that concessions have been gained for negotiations on pharmaceuticals on legitimate humanitarian grounds, the arguments centre on which countries should be able to avail themselves of the *waiver* (or whatever institutional arrangement eventually emerges to facilitate the inclusion of the exemption in the WTO) and to what public health issues it should apply. Developed countries want the waiver to apply only to a subset of developing countries and a narrow list of diseases. Developing countries are arguing that they all should have the right to avail themselves of the waiver and to determine to what public health issues it should apply. Further concessions have already been made so that least developed countries are exempt from protecting intellectual property rights in pharmaceutical products until 2016. Similar contests will be waged over biotechnology and the protection of traditional knowledge and folklore.

The TRIPS made no concessions to developing countries except that there were to be longer phase-in periods. This relative lack of concessions is an anomaly in the WTO. Special and differential treatment is accepted in the GATT. It has never been required that tariffs be harmonized. Tariff reductions have been partially phased in over fifty years. This has allowed the costs of adjustment to be spread over decades and politically sensitive sectors to remain protected. In the TRIPS, intellectual property protection had to be harmonized with high, developed-country standards in one step. This meant that all of the adjustment costs were borne by the developing

countries; developed countries had to make almost no changes. Gaisford and Richardson (2000) suggest that this symmetry in TRIPS commitments means that:

South (developing countries) loses between 40 and 47 percent of the net benefits from patent protection that it received prior to the TRIPS agreement, while North (developed countries) gains (p. 142).

Hence, the TRIPS provided perverse incentives in relation even to the small direct benefits the intellectual property protection efforts of developing countries had brought.

Conclusion

The TRIPS has become a major stumbling block at the Doha WTO negotiations. It would appear that developing countries have little interest in the TRIPS because they have no direct incentive to comply and the threat does not appear sufficient to induce compliance. Indirect incentives such as trade concessions in other areas, while sufficient to obtain the cooperation of developing countries in the establishment of the TRIPS, were not forthcoming in practice. One suspects that indirect incentives will always be more vulnerable to dilution than direct incentives. Further, direct incentives create a vested interest in enforcement while indirect incentives do not. Thus, it would seem that those countries that see their futures as being dependent on the ability to take advantage of the opportunities provided by the *knowledge economy* may need to rethink their approach to securing international protection for intellectual property.

There are already signs that technology is moving forward at a pace that will require a revision to the TRIPS. Such a revision will be very difficult to obtain given the current attitude of developing countries. There is as yet little indication that developed countries are willing to change their strategy of offering indirect incentives. For example:

In negotiations for a free trade agreement with Chile completed this week, the U.S. succeeded in obtaining protections for patents and copyrights that go beyond the provisions of the World Trade Organization Agreement on Aspects of Trade Related Intellectual Property Rights (sic).

Chile held out until the final hours of negotiations on the night of Dec. 11 on the U.S. push to include protection for copyrights for digitally delivered products, using it as a bargaining chit to achieve more access for its agricultural products (*Inside US Trade*, December 13, 2002).

or:

The European Union's success in pushing for strong protection for geographic indications of wines and spirits through the creation of an international registry is likely to be linked to the ability of the EU and other World Trade Organization members to make substantive trade liberalization proposals in the area of agriculture in the new WTO round, a senior WTO official said last week (*Inside US Trade*, November 1, 2002).

One suspects that these initiatives, even if they are successful in obtaining the concessions desired by those with a vested interest in the *knowledge economy*, will not see sufficient effort on enforcement over the long run. At some point the efficacy of the trade threat will have to be tested.

The solution to the problem of providing direct incentives to protect intellectual property will not be easy to solve. However, it would seem that the resources of developed countries would be better spent on capacity building in the creation of intellectual property than on capacity building for the enforcement of the property rights of foreign nationals. As in developed countries, once a direct stake is created in the protection of intellectual property, enforcement in developing countries will naturally follow.

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Endnotes

1. Concluding Remarks by the Chairman, Trade Negotiations Committee Meeting, WTO Geneva, December 4-6, 2002, http://www.insidetrade.com/secure/pdf3/wto2002_7744.pdf
2. Statement issued to mark World AIDS Day (December 1, 2002), Lamy Says New TRIPS Deal Must Include Re-Export Safeguard, IP/02/1778, European Commission, Brussels, November 29, 2002.
3. Senate Letter on TRIPS sent to The Honorable Robert Zoellick, United States Trade Representative, on December 9, 2002, http://www.insidetrade.com/secure/dsply_nl_txt.asp?f=wto2001.ask&dh=108719329&q=.
4. USTR Letter to African Trade Ministers, October 25, 2002, http://www.insidetrade.com/secure/dsply_nl_txt.asp?f=wto2001.ask&dh=105327674&q=
5. This issue is also contentious among developed countries.
6. This is to enhance the creation of additional knowledge by allowing other researchers access.
7. Of course, it is also possible that monopolies will lose money. There are many inventions that fail in the marketplace and represent the downside risk associated with investing in the creation of knowledge.
8. Of course, by not protecting intellectual property, they ensured that little capacity for knowledge creation would develop.
9. Not simply the use of desktop personal computers but the widespread use of computer technology in industry (e.g., robots) and consumer goods (e.g., as integral parts of modern automobiles).
10. Trade in counterfeit goods was already dealt with in the GATT.
11. The GATT 1947 was an organization that dealt with rules of trade. It was, however, somewhat unique in that it was one of the few international organizations that had a mandate to impose trade sanctions – the Security Council of the United Nations being another. Given that trade sanctions are one of the few means available to influence the behaviour of foreign governments, along with diplomacy and war, the GATT was a likely target for capture by vested interests. If the GATT/WTO can be captured by one set of vested interests, those wishing international protection for intellectual property, it may be open for capture by

other vested interests. See Kerr (2001) for a discussion of this in the context of environmental interests.

12. The General Agreement on Trade in Services (GATS) also needed an institutional home and the consensus-based GATT 1947 dispute settlement system needed to be strengthened to better deal with disputes in the trade in goods.
13. Of course, countries also had to accept GATS disciplines as well.
14. Governments appear to be very reticent to extend the ability to impose trade sanctions to other international organizations in any meaningful way. The United Nations Committee on Trade and Development (UNCTAD) and multilateral environmental agreements are obvious examples.
15. One level of appeal is provided for.
16. Either those administered by the WIPO or in a few cases those directly embodied in the TRIPS.
17. The resource commitment clause is, however, vague and may be a focus point for future disputes.
18. It may also be that a threat may be more effective while it remains untested – see Gordon et al. (2001) on the efficacy of trade threats.
19. Of course, the goods upon which trade restrictions are placed are chosen by the country retaliating. As a result, it may be possible to select products for retaliation that are politically more sensitive than their economic value indicates.
20. The WTO has not yet settled upon a method for determining retaliation in TRIPS cases but if the GATT precedent is followed the penalty should be equal in value to the cost. It is hard to imagine that WTO members would agree that the penalty in a TRIPS case should (greatly) exceed the cost.

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