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# CATPRN

Canadian Agricultural Trade Policy And Competitiveness Research Network

## **THE TRIPS AGREEMENT AS A COERCIVE THREAT: ESTIMATING THE EFFECTS OF TRADE TIES ON IPR ENFORCEMENT**

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## 1. Introduction

The introduction of the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) into the World Trade Organisation's (WTO's) set of agreements was viewed by negotiators as a potentially powerful tool in the ongoing efforts of firms from developed countries to extend control of their domestic intellectual property rights (IPR) beyond their national borders (Matthews, 2002). Firms in developed countries that rely on returns to intellectual property (IP) observed weak protection of IPR and high rates of piracy in developing countries (DgCs) (Marron and Steel, 2000), and pushed hard for negotiators to introduce binding IPR protection disciplines on WTO-member countries.

Because the TRIPS Agreement is part of the WTO's single undertaking, countries that are found to be in violation of their TRIPS Agreement obligations are subject to cross-agreement retaliation under one of the WTO's other agreements (usually the General Agreement on Tariffs and Trade, or GATT). Such retaliation would typically take the form of the suspension of tariff preferences, as outlined in the GATT.

We investigate the effectiveness of the cross-agreement retaliation threat as a means of coercing changes in regulatory protection of IPR. We hypothesise that WTO-member countries that have strong trade ties with IP-abundant countries made larger changes to their domestic IPR protection regimes in response to the TRIPS Agreement than WTO-member countries that do not trade intensively with IP-producing countries. Countries with weak IPR frameworks that have strong trade ties with IP-abundant countries could be vulnerable to cross-agreement retaliation through the GATT and may have been more responsive to potential threats from IP-abundant countries. The stronger are the trade ties (measured as export value), the larger is the "stick" with which a country can be threatened, and the more the respondent countries stand to lose in the event of trade sanctions. We suggest that such vulnerability should manifest as larger changes to domestic IPR protection regimes in response to the TRIPS Agreement.

We also investigate alternative motivations for changing IPR regimes. There may be other incentives for tighter protection of foreign firms' IPR if the threat of trade retaliation is not always a significant determinant of IPR regimes. We consider the role of foreign direct investment (FDI) in our analysis.

We find that both the TRIPS Agreement and the strength of trade ties with developed countries are important determinants of IPR protection, but that vulnerability to potential trade losses through cross-agreement retaliation is not a uniformly significant determinant across geo-economic regions. That is, the threat of trade retaliation did not augment the countries' responses to the TRIPS Agreement in all cases. Other motivations for improving IPR strength are considered and discussed.

## 2. The TRIPS Agreement as a Threat

The TRIPS Agreement was made part of the WTO set of agreements in the Uruguay Round (UR) negotiations, and adherence to its disciplines is mandatory for all WTO-member countries.<sup>1</sup> The TRIPS Agreement commits member countries to protect the IPR of firms from other member countries to minimum standards as outlined in the Agreement. The Agreement consists of seven parts that outline the minimum standards of protection and enforcement. Members are to provide national treatment to firms from other member countries with respect to IPR, grant copyrights of 50 years and patents of 20 years. Member countries also agree to establish judicial bodies with the authority to issue injunctions and award damages in cases of IPR disputes. If a foreign firm is unsatisfied with the handling of an IPR dispute, then it can lobby its home government to pursue a formal case through the WTO.

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<sup>1</sup> The TRIPS Council granted implementation delays to developing WTO-member countries, and least-developed member countries are not subject to the agreement until 2013 (WTO, 2005; WTO, undated).

Article 22 of the WTO's Dispute Settlement Understanding (DSU) outlines member countries' rights and obligations in the event of trade disputes. If a member country is found to be in violation of its obligations, then it is called on to follow the panel or Appellate Body's recommendations, or pay compensation to the complainant. If the conflict remains unresolved, then the complainant country is authorised to retaliate by suspending trade preferences to the offending country in the pecuniary amount of injury deemed to have been done by the original violation. The DSU allows for three types of retaliation, to be pursued in the following order (Spadano, 2008): 1) retaliation in the same sector in which the original violation occurred, 2) retaliation in a different sector under the same WTO agreement, and 3) retaliation under a different agreement. Options one and two are the least relevant in our context because most TRIPS-related disputes are likely to feature developed countries as complainants and DgCs (with little IP against which to retaliate) as respondents. Developed countries that prevail in TRIPS disputes are likely to pursue cross-agreement retaliation through another WTO agreement, *i.e.* the GATT.<sup>2</sup>

Jurisprudence in TRIPS-related cases is small relative to other WTO agreements. Only seven panel and Appellate Body reports related to the TRIPS Agreement have been adopted by the WTO's Dispute Settlement Body since 1995 (WTO, 2010). It is noteworthy that four of these cases involved disputes between developed countries, and just three were developed-country members pursuing action against DgC members (two against India and one against China).

Canada has been a respondent to two TRIPS-related complaints since the implementation of the Agreement. Both complaints were based on the length of patent protection; one from the European Communities and one from the United States (US). Despite having been respondents (instead of complainants), the Canadian position is supportive of the maintenance of the TRIPS Agreement in Doha Development Agenda negotiations. Specifically, the official Canadian position (DFAIT, undated) is to support the implementation of geographic indicators for wine and spirits, and the maintenance of optional *sui generis*<sup>3</sup> protection systems for plant varieties in member countries. Canada has substantial capacity in agricultural Research and Development (R&D), and stakeholders may have economic interests in ensuring the protection of their IPR in potential consumer nations in future years.

### 3. Empirical Investigation

We investigate the effectiveness of the threat of retaliatory trade sanctions in an econometric model that estimates the effects of trade ties on countries' responses to the TRIPS Agreement.<sup>4</sup> The dependent variable is an index that measures each country's administrative protection of IPR. The independent variables include an indicator of each country's status in the TRIPS Agreement (bound or not bound), a measure of bilateral trade ties with TRIPS Agreement proponent countries, an interaction term between the TRIPS Agreement variable and trade ties, and variables that control for the domestic determinants of IPR protection.

The coefficient on the TRIPS variable measures how countries' regulatory protection of IPR changed upon acceding to the TRIPS agreement, and the coefficient on bilateral trade flows is a measure of the effect that international trade ties have on protection of IPR, independent of the TRIP Agreement. The interaction variable between the TRIPS Agreement and trade ties allows us to estimate how exposure to trade retaliation through the DSU affected countries' responses to acceding to the TRIPS Agreement; that is, how significant is the threat of cross-agreement retaliation in determining IPR protection?

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<sup>2</sup> An interesting development over the past few years has been DgCs' suspension of TRIPS Agreement obligations in retaliation for GATT-related disputes with developed countries (Abbott, 2009).

<sup>3</sup> *Sui generis* protection systems are context-specific protection systems designed by member countries. These systems are not necessarily equivalent to patents.

<sup>4</sup> See the full working paper (Cardwell and Ghazalian, 2012b) for details on the data and empirical methodology.

Our first step is to estimate the empirical model with all countries in our dataset. The baseline empirical results<sup>5</sup> generate three important results. First, accession to the TRIPS Agreement had a positive and significant effect on countries' regulatory protection of IPR, independent of trade ties; this result is consistent with previous studies on this topic (Cardwell and Ghazalian, 2012a). Second, we find that the value of exports from developing countries to developed countries has a positive relationship with protection of IPR in developing countries. This suggests that DgCs that export more to developed countries increased their patent strength indices irrespective of the TRIPS Agreement. The third result from the baseline model is an insignificant coefficient on the variable that interacts TRIPS Agreement accession with trade flows; this suggests that developing countries with strong trade ties to TRIPS Agreement proponent countries did not respond more significantly to the TRIPS Agreement than countries with weaker trade ties. This suggests that the threat of trade retaliation did not significantly impact IPR protection in all DgCs.

Our next step is to disaggregate the group of countries in our dataset by geo-economic region, and investigate the importance of the trade retaliation threat at a more disaggregated level. Developing countries are separated by region: South and Central America, Middle East and North Africa, and Asia. We find that the marginal effects of the TRIPS Agreement and of trade ties on the patent strength index of South and Central American countries are equivalent to the average effects on all DgCs. The results for countries in the Middle East and North Africa aggregation suggest that countries with higher levels of exports to developed countries made smaller changes to their patent strength indices in response to the TRIPS Agreement than DgCs with lower levels of exports to developed countries. Conversely, countries in this grouping with more exports to developed countries increased their patent strength indices outside the effects of the TRIPS Agreement. Developing countries in Asia with stronger trade ties appear to have made more significant changes to their IPR protection in response to the TRIPS Agreement. This is consistent with the hypothesis that coercive threats from export-destination developed countries affected behaviour.

We also estimate an alternative version of the model in which international ties are measured using inward FDI instead of bilateral trade flows. The results from this alternative specification are robust to the use of FDI instead of trade flows.

#### **4. Discussion and Conclusions**

A cursory empirical analysis of the data confirms the findings of Cardwell and Ghazalian (2012a) that the TRIPS Agreement was a significant factor in strengthening regulatory protection of IPR in DgCs. The same cursory analysis suggests a positive correlation between a DgC's level of exports to developed countries and its protection of IPR. However, it is not immediately apparent that the strength of trade ties magnifies the effect of the TRIPS Agreement on a country's determination of regulatory IPR protection. Put another way, the potential for retaliatory trade sanctions does not appear to provide added incentives for DgCs to modify their IPR regimes through the TRIPS Agreement; at least not in our baseline model.

Closer analyses of the data reveal a more nuanced story. Estimation through a specification that disaggregates the effects by geo-economic regions reveals that the importance of the threat of trade retaliation is not uniform across regions. The threat of trade retaliation did affect the magnitude of the response of Asian DgCs to the TRIPS Agreement. Those Asian DgCs that export more to developed countries made relatively larger changes to their patent strength indices. Middle East and North African countries that export more to developed countries made relatively larger changes to their patent strength indices irrespective of the TRIPS Agreement. However, these countries made relatively smaller changes to their patent strength indices as a response to the TRIPS Agreement. Developing countries in the South and

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<sup>5</sup> Complete empirical results and discussion can be found in Cardwell and Ghazalian (2012b).

Central America aggregation increased their IPR protection regimes in response to the TRIPS Agreement and in response to exports to developed countries, but not significantly differently from other DgCs.

The effects of export ties to developed countries are valuable in measuring the importance of retaliatory trade threats. However, there are a host of other international-relations factors that could impact governments' decisions on regulatory protection of IPR. Measuring international ties through inward FDI stocks yields similar results to the models that use export values. This suggests that commercial relationships developed through FDI (and perhaps a host of other factors) are also important determinants in IPR protection decisions in DgCs. Though we do not explicitly model them here, other international-relations factors could include reputational considerations, diplomatic and military relations, and goodwill adherence to international obligations (especially the WTO set of agreements).

What can we say about the effectiveness of cross-agreement retaliation in the context of the TRIPS Agreement? If threats of such retaliation were effective, then exports to developed countries should significantly impact the effect of the TRIPS Agreement on protection of IPR. This is not always the case. Developing countries generally increase IPR protection regimes in response to trade flows and in response to the TRIPS Agreement, but these effects are only complimentary in some geo-economic regions. Some regions/countries change their domestic IPR protection regimes in response to other types of commercial ties, diplomatic relations, or goodwill adherence to their WTO obligations.

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