



**AgEcon** SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search  
<http://ageconsearch.umn.edu>  
[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

**ECONOMIC ANALYSIS IN DISPUTES OVER TRADE  
REMEDY AND RELATED MEASURES IN AGRICULTURE,  
WITH EXAMPLES FROM RECENT CASES**

Daniel A. Sumner, Richard R. Barichello, and Mechel S. Paggi

January 2004

Working Paper Number: 2004-01

Food and Resource Economics, University of British Columbia  
Vancouver, Canada, V6T 1Z4  
<http://www.agsci.ubc.ca/fre>

**ECONOMIC ANALYSIS IN DISPUTES OVER TRADE REMEDY  
AND RELATED MEASURES IN AGRICULTURE, WITH EXAMPLES  
FROM RECENT CASES**

**June 5, 2003**

**Daniel A. Sumner, Richard R. Barichello, and Mechel S. Paggi<sup>1</sup>**

**Draft paper prepared for presentation at the International Conference,**

**“Agricultural policy reform and the WTO: where are we heading?”**

**Capri (Italy), Palazzo dei Congressi, June 23-26, 2003.**

---

<sup>1</sup> Sumner is the director of the University of California Agricultural Issues Center and the Frank H. Buck, Jr., Professor in the Department of Agricultural and Resource Economics, UC, Davis; Paggi is the director of the Center for Agricultural Business, California State University, Fresno and Barichello is a professor at the University of British Columbia.

**Economic Analysis in Disputes over Trade Remedy and Related Measures in  
Agriculture, with Examples from Recent Cases**

**ABSTRACT**

Antidumping duties, countervailing duties and safeguard duties are protection measures that are once again issues for negotiation in the latest round of World Trade Organization trade negotiations. In addition, disputes related to domestic agricultural subsidies are gathering attention as the Uruguay Round “Peace Clause” expires. This paper considers the application of economics in some high profile agricultural cases. Domestic subsidies for agriculture remain high in many countries, which may make countervail, nullification and impairment and serious prejudice cases more common. At the same time, with fluctuation of farm prices, with limited short-term control over farm output by farmers, and with many farms and other firms supplying most agricultural markets, so that competitive markets prevail, the economic logic of dumping and antidumping is even more troublesome when applied to agricultural commodities.

The paper reviews the role of economic analysis and how the law and economics interact in trade cases. The paper reviews where economic analysis enters or does not enter and how some legal concepts may differ from the logic applied by most economists. Measurement of the amount of alleged subsidy or dumping, and the effects of subsidies are considered. In addition, the paper considers issues related to measurement of losses to the affected home-country industry from imports, again with reference to how agriculture may differ from traditional cases applied to manufacturing products. Finally, the paper considers how the spread of the use of trade remedy procedures may affect the economic implications for reform, again with particular reference to agriculture. Ideas for reform of the General Agreement on Tariffs and Trade are discussed.

**Economic Analysis in Disputes over Trade Remedy and Related Measures in  
Agriculture, with Examples from Recent Cases**

Most attention of academic agricultural trade policy economists has been attracted to discussions of the general effects of policy measures on trade and negotiations to lower border measures or limit the effect of domestic subsidy on trade. A smaller, but still substantial academic literature has gradually developed that examines trade remedy rules and their consequences in agriculture. Less research has studied *ad hoc* trade disputes over implementation of agreements. Outside of the academic literature there is a large amount of professional economic analysis developed around disputes over anti-dumping, countervailing duties, and safeguards. There is also a growing body of economic analysis related to disputes over implementation of trade agreements, and in particular over compliance with the 1994 Uruguay Round of modification to the General Agreements on Tariffs and Trade and the agreement that created the World Trade Organization (WTO).

The trade issues that we will consider here include anti-dumping (AD), countervailing duties (CVD), safeguards actions, nullification, impairment and circumvention, and subsidies. These are all often subject to trade disputes in which economics plays a significant role. Some of these issues are initiated under domestic legal authority and are discussed before domestic tribunals, other times they are dealt with directly by bilateral or multilateral dispute settlement bodies, such as under the North American Free Trade Agreement or the WTO.

The paper provides some background on the administrative and legal institutions and procedures, with emphasis on where economics enters the determination of outcomes. (For a discussion of some of these rules in a U.S. agricultural context, see Regmi and

Skully.) Then we turn to how economic analysis enters in applying the rules and dealing with disputes. We note at the outset that, as with all other matters of economic policy, economists do not determine the outcomes of these trade remedy procedures and related disputes. Indeed, as will become clear below, economists have often expressed concerns about how economics is used or not used in these cases.

This paper does not attempt to document the use of the various provisions for agricultural products. Blonigen has reported such data in detail. There are also many CVD actions applied to agriculture. Safeguard actions have not been applied often in agriculture since 1994. There are relatively few WTO disputes dealing with alleged violations of the 1994 GATT Agreement on Agriculture. And, given the peace clause, WTO cases to deal with subsidies have been quite uncommon.

### **Rules, procedures and the use of economics**

#### *Anti-dumping*

At least since Viner's classic treatment, more economic attention has been paid to dumping and anti-dumping than other areas of trade remedy or trade disputes (major references in the modern literature are Ethier, and Blonigen and Prusa). In a widely cited reference, Boltuck and Litan collected studies on dumping by economists and lawyers that included both researchers and practitioners and some authors who are in both groups. The classic economic idea of dumping for which some remedy may be appropriate related to predatory pricing. But, few economists see much evidence or economic logic that such international predatory pricing is widespread.

Antidumping actions arise when a domestic industry producing a "like" product petitions its national government to respond to imports that it claims are sold at less than

fair market value. The term “less than fair value” (LTFV) has a complex and technical legal definition, but generally means that a product is exported at a price that is below the applicable price in the home market or sold below cost, or sometimes is sold below the applicable price in some third-country market. The amount by which the product is found to have been sold at less than fair value by each importing firm gives rise to a dumping margin and, if the case proceeds, establishes a “dumping duty” applicable to each importer.

In the United States, the Department of Commerce (DOC) is charged with determining the dumping margins. The DOC first issues a preliminary dumping margin and then follows this a few months later, after a more thorough investigation, with a determination of a final margin. As a matter of fact, given the rules established for the calculations and, perhaps, the political economy atmosphere of the agency, the DOC almost always finds that dumping has occurred (Blonigen). The chapters in Boltuck and Litian deal mainly with the theory and measurement of dumping margins and reflect the unease that most economists have with the concepts and the practical application of the concepts. There are a number of concerns expressed by most economists about how dumping margins are calculated in practices ranging from specific statistical and accounting procedures to the demand on foreign firms for data produced in a form that the DOC finds most convenient.

Blonigen and Prusa state the consensus view of academic economic specialists about the determination of dumping margins in strong terms and direct language:

“... the legal definition of “dumping” ...is almost completely divorced from any economic notion of dumping. Foreign firms who charge not only higher prices abroad than they do at home, but also higher prices than their

domestic competitors, are still saddled with dumping margins of 50 percent or higher. AD no longer has anything to do with predatory pricing. Even more to the point, all but the staunchest supporters agree that AD has nothing to do with keeping trade fair. ...It is simply a modern form of protection.” pp. 2-3. ..

The other part of an antidumping investigation is the requirement that the government determines whether a domestic industry producing a like product is “materially injured” by reason of subject imports. A second consideration is the determination that LTFV imports “threaten” future material injury. In the United States, material injury is considered by the United States International Trade Commission (USITC), an independent body with six commissioners who are appointed by the Congress and the President. The USITC professional staff is comprised of lawyers, economists and industry specialists who have responsibilities for a variety of research and reporting duties, in addition to helping commission members arrive at findings with respect to injury. The ITC process itself is also in two steps. First a preliminary investigation and determination where the standard is lower, the majority of the commission must only find a “reasonable indication” that a domestic industry is materially injured. The final determination removes the qualifiers “reasonable indication.” It is generally accepted that it is difficult for importers responding to claims of injury to the domestic industry to prevail in the preliminary stages.



*Countervailing duties*

Rules and procedures for responding to alleged government subsidies to foreign production exported into a home market are much the same as those for dealing with alleged dumping. CVD cases require determining a per unit subsidy, if any, and determining if the home industry producing a like product is materially injured by reason of the exports that are shipped at “less than fair value.” As with dumping margins, the rules for calculating a per unit subsidy are arcane and not necessarily connected to economists’ notions of programs or policies that lower marginal cost functions or shift out supply. Economists sometimes play a role in helping officials understand how subsidy programs operate, but full economic models of the role of government subsidies on the excess supply function and, therefore, on export quantities or prices are not typically used in these proceedings. This is also similar to the procedures for AD cases.

In fact, many cases of alleged dumping are accompanied by allegations of subsidy and the AD/CVD cases often proceed in tandem (Meilke). For example, current and recent agricultural cases dealing with Canadian wheat and Canadian live cattle exports into the United States included both AD and CVD claims. An exception is cases dealing with commodities from “non-market” economies, where the distinction between the private sector and the government is blurred and allegations of dumping seem to be a surrogate for allegations of subsidy (see for example the USITC dumping case on Chinese garlic). Following the rules used in calculating margins in those cases, dumping margins are used because one is not required to document specific government transfers. Furthermore, domestic prices are not considered market-driven and input prices from other countries can be used in constructing costs. Thus, for example in cases dealing with exports from China

of garlic or apple juice into the United States, dumping was alleged even though, much of the informal discussion surrounding those cases dealt with the involvement of implicit subsidies from the government of China.

The injury issues for CVD are the same as for AD including the requirement that there be determination that LTFV imports have caused material injury or threaten material injury to the domestic industry producing a like product.

*Safeguard actions*

Unlike AD and CVD cases, no unfair trade allegations are required for safeguard actions. Under safeguard rules the requirement is only that there has been a large increase in imports and a petition from an industry representative alleging that the import surge has caused injury to the domestic producing a “like” product. In the United States, and generally among WTO members, because no “unfair” exports are claimed, the injury test is tighter for safeguard actions than for AD/CVD actions. The government must determine that articles are being imported into the United States in such increased quantities as to be a substantial cause of serious injury. Where the term “substantial cause of serious injury” is generally accepted to require a higher degree of evidence than the material injury test used in CVD and AD cases. The safeguard injury tests include the issue of threat of injury to cover those situations where injury is imminent.

The objective of safeguard actions is to facilitate adjustments by the domestic industry. Therefore, if injury is found the next step is a set of recommendations of government actions that help that adjustment. These recommendations are not limited to trade restrictions, but under terms of the WTO agreement that may include temporary tariffs or tariff-rate quotas. In the United States, the ITC determines if the import surge has

been a substantial cause of serious injury. Then the ITC crafts recommendation to the President for actions that would help the industry adjust. If new trade barriers are imposed they can last a total of three years. Furthermore, the safeguard action is reviewed 18 months after implementation to see if objectives are being met and if the policy actions should be adjusted.

Safeguard rules in the United States allow for provisional relief for perishable agricultural products if injury or threat of injury can be shown and if the injury would be difficult to repair if the full time schedule, which typically takes 6 months or longer, were followed. If the provisional relief provision is exercised the provisional injury determination is made within 21 days.

The Uruguay Round agricultural market access agreement included provisions for a special safeguard to deal with unusual import surges. The provisions are available to the 38 members and limited list of products that were designated in members' implementation schedules. The additional tariff may be applied if the volume of imports surge or if the import price falls significantly. These special-safeguard tariffs may only be in force until the end of the year in which they are applied. Application of this provision has been rare and application of the provision leaves no role for analysis, other than purely statistical determinations of import surges or price declines.

*Nullification and impairment, serious prejudice and subsidy provisions of the GATT*

The General Agreements on Tariffs and Trade include in Article 5 of the Agreement on Subsidies and Countervail Measures provisions stating that members may not undertake actions that nullify, impair or circumvent the commitments they have

undertaken. Clearly an agreement would be worthless if members could violate the agreement with impunity. Related to this common sense notion is the agreement that members may not use subsidies that cause serious prejudice to the legitimate trade interests of another member (WTO, GATT legal texts).

Article 6 of the Agreement on Subsidies and Countervail Measures provides more detail on when subsidies are considered to cause serious prejudice to the legitimate interests of other members. The following apply: (a) reduce imports into the home market of the subsidizer (b) reduce exports into third country markets; (c) undercut the price of other members, or suppress or depress relevant market prices; or (d) increase the market share of the subsidizer. As with AD, CVD and safeguard measures, these provisions apply within the context of the sales of a “like” product (WTO, GATT legal texts).

According to Article 13 of the GATT 1994 Agreement on Agriculture, under certain circumstances the provision on nullification and impairment and serious prejudice does not apply to certain subsidies maintained on agricultural products. This so-called “peace clause” has many technical details and is subject to ongoing legal interpretation (Steinberg and Josling). Roughly, it carves out limited exemptions from trade actions for non-trade- distorting green box subsidies, and export subsidies that are made in conformity with the 1994 agreement are not actionable. Amber box and blue box subsidies have more limited protection and in particular, if the amount of subsidy for a specific commodity exceeds that provided in 1992, the peace clause does not apply to that commodity and Article 5 actions may proceed.

### **The application of economic and econometric models**

Under all these various legal procedures there is a clear demand for the application of economic analysis to determine the market effects of impacts of trade flows and subsidies. In the AD, CVD and safeguard actions, which are handled in domestic tribunals, the main role for economic modelling is to help assess whether the imports have caused or threaten to cause injury to the domestic industry that produces a like product. In the WTO cases under the Agreement on Subsidy and Countervailing Measures, issues such as effects of subsidies on trade patterns and price suppression or price depression in relevant market also arise.

Many demands on the economic analysis are similar across these types of disputes. First, they are adversarial. The agencies involved, such as the USITC, have their own staff economists and experts who provide background and contextual information about the industry involved and provide direct assistance to the decision makers. The agency economists may develop their own economic and econometric analysis or may primarily help the decision makers interpret the technical modelling done by economists who are acting as experts for one of the parties to the case. Parties bringing allegations and the respondents in a dispute naturally have advocates and their own experts, including economists. Thus in a typical case there are at least three teams of economists involved. There are often more than three teams in cases where there is more than one party on one side or another in the case. For example in an AD/CVD case more than one export source may be involved and in a WTO case more than one country may bring complaints and each may have independent teams of advocates and experts. Some of these teams may collaborate to some degree and will attempt to avoid conflicting with one another.

Another feature that cases have in common is that periods of time over which allegations apply are typically the very recent past and perhaps a few years into the future. A “period of investigation” may be the most recent three years for which data are available, although up to five years may apply if conditions warrant. This means that the analysis required is a kind of counterfactual history that asks what would have been the pattern of trade flows, production, prices and related economic variables if the alleged dumping, subsidy or import surges had not occurred.

The typical approach to these questions for agricultural commodities and products is some variety of partial equilibrium simulation model capable of answering quantitative questions about causation. Boltuck reviews the use of such simulation models by the USITC staff where the COMPAS model has been applied to help in injury determinations on a routine basis. The COMPAS model was designed mainly to apply to industrial good and sometimes needs careful elaboration and interpretation to provide useful information about agricultural commodity industries. For example, parts of the US wheat industry have petitioned for relief from injury from imports from Canada even though the United States is the world’s largest wheat exporter. The COMPAS model itself is not designed to deal with an import sensitive industry that is also a major exporter.

The prototypical model used for determination of injury sets out a series of supply and demand equations with multiple products that are close but less than perfect substitutes. The models are typically static and partial equilibrium, but perhaps with linkages to upstream and downstream markets. These models require parameters for market shares, domestic and foreign supplies and demands responsiveness and substitution between the foreign and domestic like products. The typical case applies an Armington

specification of demand to limit the number of parameters one must estimate or otherwise determine and still allow products of different origins to be differentiated (Boltuck; and Yamazaki and Paggi).

In addition to structural simulation models, time series data are also used to relate imports to changes in indicators of industry injury. The standard approach, is to simply compare trends in imports over a 3 year period with trends in domestic prices, and to attribute causation on the basis of trends that appear to be related. In every instance this is a questionable practice. It is especially problematic for typical agricultural commodities with annual production cycles. Even when monthly data are available, seasonality and annual production patterns likely dominate. More elaborate time series approaches are also applied, but they face the problem of relatively short periods of investigation and the challenge of attributing causation to imports in the face of a host of other factors that affect agricultural markets over time.

The definition of the “like product” is preliminary to the assessment of the degree and cause of injury or the other economic impacts. It is natural for economists to use notions of elasticity of substitution or cross elasticity of demand in what markets are appropriate for considering injury or other economic impacts. Our economic notions subsume such considerations and physical similarities, similar market channels and other factors that are typically considered at this step in the legal analysis. A narrow definition of the market for the like product typically means the share of imports in the affected market is larger and the substitution between imports and the domestic product are higher. However, excluding from the affected market products that are relatively close substitutes, also implies that the elasticity of demand for the domestic like product will be larger.

Therefore the price impact of imports in the market under consideration will be smaller.

Thus there are tradeoffs in the determination of a narrow or broad like product.

### **Some example cases**

Let us consider a few sample cases to better see the role of economics in these types of trade disputes.

#### *Antidumping and Countervailing Duties*

The first antidumping action on fresh garlic exports from China to the United States was initiated in 1994 and the result was an antidumping duty of 377 percent and an affirmative finding that Chinese exports of fresh garlic had materially injured the U.S. fresh garlic industry, but not the industries comprised of garlic for processing or garlic for seed. The five year review report from the USITC concluded that revoking the antidumping duty would likely lead to renewed material injury. Over the period since the original antidumping duties were put in place, the export of fresh garlic from China first dropped to zero and then gradually expanded to the pre-dumping duty quantity. At the same time imports of processed garlic have expanded dramatically (Yamazaki and Paggi).

The size of the dumping margin in this case is not out of line with other cases involving exports from China, but is worth considering briefly. China is considered as a non-market economy and the Chinese firms did not respond adequately to the request for data to set dumping margins. That meant the DOC used information supplied by the U.S. industry to determine cost of production in China. Since price data from China were considered unreflective of market data, cost condition in a third country was used to apply to China. The bias in this approach is potentially large, when for example the surrogate country has significantly higher wage rates, as is likely when data from a country with well



developed data sources are used in place of data from China. The U.S. procedures in this case were particularly murky, especially compared to the parallel Canadian treatment.

Despite the large antidumping duty the gains to the U.S. industry from the successful protection effort seem limited (Yamazaki and Paggi). Several factors account for this. First, exports of fresh garlic from China to the United States have resumed despite the very large import duty. Second, the export of processed garlic has grown substantially and processing is the primary demand for garlic in the United States. Third there is evidence that Chinese garlic is exported to third country markets that then export large quantities of garlic to the United States. Thus net exports to the U.S. market have not declined as expected by the U.S. industry. The preliminary analytical result of Yamazaki and Paggi shows that gains to the domestic industry depend on relatively large supply elasticities of Chinese export supply to the United States and relatively low supply elasticities to the United States from other foreign suppliers.

In 1999, a group of cattlemen that was centered in the Northern plains and Northern mountain region of the United States initiated an antidumping and countervailing duty case against the live cattle industry from Canada. The product definition included feeder calves, fat cattle ready for slaughter, and cull cows. The positive dumping duty in this case was small relative to the Chinese garlic case, but large enough to put a severe financial strain on the Canadian cattle industry. The initial finding by the USITC was for an affirmative finding on injury, but this was reversed after the final hearing before the USITC.

The Canadian cattle industry was joined in the case by the U.S. beef processing industry, among others U.S. interests, in arguing against the finding of material injury.

The Canadians made several economic arguments claiming that exports from Canada did not cause material injury to the U.S. live cattle industry. First, they claimed that since imports accounted for only three percent of the U.S. market for the like product, the chance of material injury was slight. The U.S. industry argued, in effect, that the demand elasticity for cattle was very small (in absolute value) so even a small increase in supply would have large effects on price. Second, the Canadians pointed out the low profitability of the U.S. cattle industry at the time the case was initiated was due to the cattle cycle and that as the industry moved through the cycle prices and profits were naturally improving.

Third, the Canadians pointed out that theirs was a competitive industry as was the U.S. industry. They argued that they had no conceivable economic incentive to sell below cost or sell below the price in the Canadian market. This argument would be important (and perhaps compelling to most economists) but it is not directly relevant in the injury determination and the determination of dumping duties is an accounting exercise divorced from economic modeling.

Finally, the Canadians also pointed out that live cattle were an input into the production of beef and that the border for beef trade was open between the U.S. and Canada. As economists know well from the factor price equalization theorem, trade in the final product, in this case beef, causes the factor prices to converge even if trade in the factor (in this case live cattle) is restricted. The conditions for this theorem apply quite well in the U.S. and Canadian beef market: both countries produce beef using the same technology and the prices of beef are about the same. Therefore, the argument is that a dumping duty would not help the U.S. cattle industry because as Canadian cattle that were restricted from moving south would simply substitute for U.S. cattle in the unified beef

market either by competing with exports of beef from the U.S. or entering the U.S. as beef rather than live cattle. Ironically this result would also mean losses to firms and workers in the U.S. slaughter industry. Although the USITC did reverse its initial injury finding, the evidence is not clear that they used these economic arguments as the main reason.

In 2001, AD cases were filed to restrict tomato exports from Canada to the United States and from the United States to Canada. The U.S. case dealt exclusively with greenhouse tomatoes from Canada. The Canadian case dealt with all U.S. fresh tomato exports. In April 2002, the USITC reversed its preliminary determination and ruled that Canadian imports did not cause material injury to the U.S. industry. The primary finding behind this decision was that the like product was the entire U.S. fresh tomato industry not solely the U.S. greenhouse tomato industry. With this finding it was easy to determine that the share of Canadian imports was too small to cause material injury to the whole U.S. fresh tomato industry. On the Canadian side, the industry chose to drop its case after the USITC final ruling.

These cases together illustrate again of the lack of economic reasoning associated with findings of dumping. As with the Canadian cattle industry, it is hard to claim anything other than perfect competition in tomatoes on both sides of the border. Furthermore, one would have to strain to develop a plausible economic model under which it was in the interest of the Canadian industry to dump into the United States at the same time the U.S. industry found it profitable to dump into the Canadian market. Of course, this reasoning was not the basis for the negative injury finding. Indeed even that finding was not based on the sort of evidence to which economists would turn first. For example,

econometric evidence on the cross elasticity of demand between greenhouse and field tomatoes was not used by the USITC.

*Safeguard actions*

In 1999, the United State lamb industry petitioned for relief from imports of lamb meat from Australia and New Zealand. No claims of unfair trade were made and so the issues turned solely on the finding of substantial cause of serious injury. The U.S. lamb industry has been declining gradually for 50 years, with some periods showing faster decline than others. Lamb consumption is down to less than one percent of U.S. meat consumption. Imported lamb meat, which comes almost exclusively from Australia and New Zealand, comprises a substantial share of the total lamb consumption in the United States. The petitioners claimed that a surge in these imports had depressed prices for U.S. lamb and heightened economic problems in the industry. Respondents noted that the U.S. lamb industry lacked innovation, had allowed the market for lamb to virtually disappear and had not acknowledged that their primary competition came from beef pork and chicken. The economic argument that movements in the prices of beef and pork dominate movements the price of lamb relies on a moderate degree of substitution and the huge market share of these other meats relative to lamb. Empirically it was also true that the price of lamb followed the cattle cycle and that during the period when lamb prices were depressed was when cattle and pork prices were also low.

None of these arguments swayed the USITC, which recommended that the President imposed temporary tariff-rate quotas to assist the industry. Furthermore, they continued that recommendation in the midterm review that was held 18 months after the duties were instituted. The midterm review considered a new proposal for relief from the

domestic lamb industry in the form of a variable levy tied to currency exchange rate movements. This idea would have meant a new and unique form of protection for the United States and likely would have been counter to U.S. obligations at the WTO. That proposal was not successful and the original tariff-rate quotas were left standing.

However, the original safeguard action was appealed by Australia and New Zealand to the WTO, which ruled in their favor that the USITC has misapplied its own procedures in part because the USITC did not sufficiently consider whether injury to the lamb industry was caused largely by factors other than imports. The U.S. accepted this ruling and ended the duties.

#### **WTO subsidy cases**

The United States and New Zealand joined in challenging the Canadian dairy export scheme that was implemented after the 1994 GATT agreement took effect. Canada was accused of violating its commitment under the export subsidy provision of the Agreement on Agriculture by creating a new export subsidy program that was one step removed from direct federal government payments conditional on exports, but which had the same effect. Without attempting to discuss the complexities of Canadian dairy policy or the new scheme, we may simply note that prices within Canada are well above border prices and Canada maintains a tight tariff-rate quota that limits dairy product imports to a minimum access quantity. Canada also operated a supply management program that restricted the quantity sold in the domestic market. The new program facilitated producers releasing production above quota to exporters at prices that were competitive in the world market, and therefore far below the price received for any milk sold for the Canadian market. Under the new program Canadian exports expanded and the United States and

New Zealand argued that, given other Canadian policy, this was evidence that the new program amounted to an export subsidy. This case dragged on for four years, but after multiple rulings and adjustments in the program in Canada the WTO found again in January 2003 that the Canadian system continued to violate Canada's obligations.

The end result of this case, if it is indeed over, will leave most economists with mixed impressions. First, most economic analysis of Canadian dairy policy points out the supply management scheme is detrimental to Canadian consumers and overall economic welfare. Furthermore the high border barriers harm world dairy markets as well as Canadian consumers. Given this system, the idea that Canada could export dairy products free of government assistance is counter intuitive to say the least. However, the WTO ruling was that the export subsidy would be determined by comparing the export price to a measure of average cost of production from a government survey of dairy farms that had been developed to set the minimum prices for the domestic market. That measuring rod sounds much like the kind of calculation used to find huge dumping margins whenever a case is brought.

The newest WTO subsidies case deals with allegations by Brazil that U.S. cotton subsidies unfairly harm other cotton suppliers in world cotton markets. A dispute panel was named in the spring of 2003 and the case is scheduled to go forward in the summer of 2003. Interestingly, Brazil did not wait for the peace clause to expire at the end of 2003 because it claims that U.S. cotton subsidies have increased substantially compared to the 1992 levels. This case by raising issues of causation of U.S subsidies on world market conditions will likely rely heavily on economic analysis. It is also important for implications for post-peace conduct of similar cases (Steinberg and Josling).

### **Reforms suggested**

It is natural and perhaps predictably self-serving for economists to argue for a larger role for economics in trade remedy cases. Economists think they know what dumping means and see little or no relation between economic concepts and how dumping margins are calculated under WTO rules. Nor do we see any compelling argument that dumping in the potentially welfare reducing sense of predatory pricing actually exists with any frequency. These observations are even stronger for agricultural products because of the competitive nature of the markets, the large degree of price variability and lack of control over output among other reasons. Thus when economists argue for simply scrapping the whole edifice and artifice of antidumping, this receives considerable support among agricultural economists. The trade policy negotiators sometimes make a political economy argument that antidumping provisions allow for more and needed political support for overall trade reforms and tariff reductions. This is a hard point to prove, but may be plausible, at least sometimes. There are many proposals for improving the transparency and consistency of calculating dumping margins, and many of these detailed suggestions would improve the economics of the situation.

One proposal is to replace antidumping with safeguard actions so that the intellectually questionable practice of finding positive dumping margins can be eliminated and if serious injury were found the higher duties would be explicitly temporary. If this safeguard replacement were to move forward then some adjustments may be warranted. For example, a requirement that the industry aids be minimally trade-distorting (as with Sanitary and Phytosanitary restrictions) would encourage WTO members to use means other than tariff-rate quotas to help industries adjust to competition from imports.

Dealing with countervail is less obvious for most economists. The same basic welfare arguments apply. Nations typically gain welfare by accepting subsidized exports into their home market. Nonetheless it is well established that industries will not be expected to compete with product that benefits from government subsidy. Furthermore, application of CVD may encourage governments to reduce or eliminate trade distorting agricultural subsidies, which has been a goal of the WTO. Of course, encouraging more open and unsubsidized trade by adding trade barriers is a dangerous game. A more consistent approach would be to facilitate nullification, serious prejudice and similar cases that encourage agricultural policy reform by directly attacking subsidies rather than closing markets in response to the subsidies. Indeed, an additional idea would be to eliminate CVD and replace it with easier application of nullification and impairment and serious prejudice.

### **Conclusions**

Economists have major roles to play in trade remedy cases and WTO subsidies cases. The economics that applies most is based on the models and empirical tools with which we are long experience and accomplished. Of course, as is usual in the policy context, decisions are not made on the basis of economic arguments alone, but that does not mean that economics is irrelevant. By the market test of whether interested parties use (and pay for) economic analysis, economics, and ever more sophisticated economics, has been contributing substantially to decisions.

Economics can also contribute with ideas for reform of the underlying rules. And some of these reforms will make economic analysis in even greater demand.



## References

- Armington, P. S., (1969) "A Theory of Demand for Products Distinguished by Place of Production." *IMF Staff Papers*, 16(1): 159-178.
- Barichello, R.C. (2003) "Anti-Dumping in Agriculture between Canada and the U.S.: Two Cases of Tomatoes" draft paper, University of British Columbia (January).
- Blonigen, Bruce A. and Thomas J. Prusa. "Antidumping". NBER Working Paper 8398, July 2001. Forthcoming in *Handbook of International Trade*, eds. E. Kwan Choi and James Harrigan. Oxford, UK: Blackwell Publishers.
- Boltuck, Richard D. (1998) "Applying the COMPAS Model at the Korean Trade Commission" unpublished paper Charles River Associates, Washington, DC.
- Boltuck, Richard and Robert E. Litan, eds. 1991. *Down in the Dumps: Administration of the Unfair Trade Laws*. Washington, DC: The Brookings Institution.
- Canadian International Trade Tribunal, (2000) *Fresh Garlic Originating in or Exported from the People's Republic of China*. Review No.: RD-99-002.
- Canadian International Trade Tribunal, *Fresh Tomatoes, Originating in or Exported from The United States of America, excluding tomatoes for processing*. Inquiry No. NQ-2001-004. June 26, 2002.
- Meilke, Karl D. (1997) "Agricultural Policies, Trade Agreements and Dispute Settlement" in Loyns, R.M.A., Ronald D. Knutson, Karl Meilke, and Daniel A. Sumner. Editors, *Harmonization/Convergence/Compatibility in Agriculture and Agri-food Policy: Canada, United States and Mexico, a Conference Proceedings*. Winnipeg, Canada: University of Manitoba:37-44.

Regmi, Anita, and David Skully. (2002) "Trade Remedy Laws and Agriculture."

*Agricultural Outlook* (August):26-30.

Steinberg, RE and T.E. Josling (2003) "When the Peace Ends: The Vulnerability of EC and US Agricultural Subsidies to WTO Legal Challenge." Draft paper, Stanford University.

United States International Trade Commission. (1998) *Summary of Statutory Provisions Related to Import Relief*, Publication 3125, Washington, D.C.

United States International Trade Commission. (2001) *An Introduction to Administrative Protective Order Practice in Import Injury Investigations*, Third Edition, Publication No. 3403, Washington D.C.

United States International Trade Commission. (2001) *Antidumping and Countervailing Duty Handbook, ninth edition*, Publication 3482, Washington, D.C.

United States International Trade Commission. (2001) *Fresh Garlic from China, Investigation No. 731-TA-683 (Review): Determination and Views of the Commission*, Publication No. 3393, Washington, D.C.

United States International Trade Commission. (November 1999) *Live Cattle from Canada, Investigation No. 731-TA-812 (Final): Determination and Views of the Commission*, Publication No. 3255, Washington, D.C.

United States International Trade Commission. (December 2002) *DURUM AND HARD RED SPRING WHEAT FROM CANADA, Investigation Nos. 701-TA-430A and 430B and 731-TA-1019A and 1019B (Preliminary): Determination and Views of the Commission*, Publication No. 3563, Washington, D.C.

CAPRI Conference, Sumner, Barichello and Paggi, June 2003

United States International Trade Commission. (April 1999) *Lamb Meat Investigation No. TA-201-68 Determination and Views of the Commission*, Publication No. 3176, Washington, D.C.

United States International Trade Commission, *Greenhouse Tomatoes from Canada (Investigation No. 731-TA-925 Final): Determination and Views of the Commission*. USITC Publication No. 3499, April 2002.

United States International Trade Commission. (January 2001) *Lamb Meat Investigation No. TA-204-3 (Review): Determination and Views of the Commission*, Publication No. 3389, Washington, D.C.

World Trade Organization. [http://www.wto.org/english/docs\\_e/legal\\_e/24-scm\\_01\\_e.htm](http://www.wto.org/english/docs_e/legal_e/24-scm_01_e.htm)  
Article 5: Adverse Effects  
[http://www.wto.org/english/docs\\_e/legal\\_e/14-ag\\_02\\_e.htm](http://www.wto.org/english/docs_e/legal_e/14-ag_02_e.htm)

WTO. (2002) CANADA - MEASURES AFFECTING THE IMPORTATION OF MILK AND THE EXPORTATION OF DAIRY PRODUCTS SECOND RECOURSE TO ARTICLE 21.5 OF THE DSU BY NEW ZEALAND AND THE UNITED STATES. Document AB-2002-6 Report of the Appellate Body.

WTO (2001) UNITED STATES - SAFEGUARD MEASURES ON IMPORTS OF FRESH, CHILLED OR FROZEN LAMB MEAT FROM NEW ZEALAND AND AUSTRALIA

CAPRI Conference, Sumner, Barichello and Paggi, June 2003

WORLD TRADE ORGANIZATION (2002) WT/DS267/1 G/L/571 G/SCM/D49/1  
G/AG/GEN/54 (October) (02-5314) UNITED STATES - SUBSIDIES ON  
UPLAND COTTON Request for Consultations by Brazil.

Yamazaki, Fumiko and Mechel S. Paggi. (2003). "Fresh Garlic from China: U.S. Trade  
Remedy Law and a California Import Sensitive Commodity." Draft paper. Center  
of Agricultural Business, California State University, Fresno (May).