An introduction to the WTO and GATT

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Since its inception in 1995, the World Trade Organization (WTO) has regularly been in the news. There have been optimistic stories of expanding WTO membership that emphasize that freer trade generates numerous benefits for consumers. Newspapers report on the details of WTO entry negotiations for important countries like China and remind us of the gains from trade. At other times, media reports might lead us to believe that disputes among WTO members are about to tear the organization apart. Disagreements between the U.S. and the European Union (EU) over everything from U.S. corporate taxation, to genetically modified organisms, to special steel tariffs make headlines worldwide. Finally, some groups seem unconvinced by and resentful of claims that free trade makes the entire world better off. Huge numbers of people from environmental and labor groups gather at various international meetings of heads of state and government ministers to protest globalization in general and the WTO in particular. Some representatives of developing countries are concerned that they have liberalized their trade and agreed to intellectual property protection for developed country products but have received almost no additional access to agricultural markets in the industrialized world.

What are we to make of all this? What is the WTO? What is it trying to accomplish and why? How does the world trading system function? Why are there so many disputes among countries that belong to the WTO?

This article provides an overview of the General Agreement on Tariffs and Trade, better known as GATT, and the WTO system. In the first section, I present a brief history of GATT and the WTO. In the following section, I discuss the fundamental principles that underlie the post-WWII world trading system and explain how these principles work to increase welfare. In the third section, I describe the numerous exceptions to GATT's requirement of *nondiscrimination*, or equal treatment, and review the economics literature that seeks to explain the rationale for and consequences of these exceptions. Then, I present a short summary of dispute resolution within the WTO.

A brief history of the WTO and GATT

The World Trade Organization (WTO) and its predecessor, the General Agreement on Tariffs and Trade (GATT) have been enormously successful over the last 50 years at reducing tariff and other trade barriers among an ever-increasing number of countries. The predecessor to the WTO began in 1947 with only 23 members; today it has 146 members, comprising approximately 97 percent of world trade.[1] See box 1 for a timeline of GATT and the WTO.[2]

Although the WTO, established in 1995, is relatively young for an international institution, it has its origins in the Bretton Woods Conference at the end of World War II. At this conference, finance ministers from the Allied nations gathered to discuss the failings of World War I's Versailles Treaty and the creation of a new international monetary system that would support postwar reconstruction, economic stability, and peace. The Bretton Woods Conference produced two of the most important international economic institutions of the postwar period: the International Monetary Fund (IMF) and the International Bank for Reconstruction and Development (the World Bank). Recognizing that the *beggar-thy-neighbor* tariff policies of the 1930s had contributed to the environment that led to war, ministers discussed the need for a third postwar institution, the International Trade Organization (ITO), but left the problem of designing it to their colleagues in government ministries with responsibility for trade.[3]

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BOX 1

Timeline of GATT and the WTO

1944: At the Bretton Woods Conference, which created the World Bank and International Monetary Fund (IMF), there is talk of a third organization, the International Trade Organization (ITO).

1947: As support for another international organization wanes in the U.S. Congress, the General Agreement on Tariffs and Trade (GATT) is created. The GATT treaty creates a set of rules to govern trade among 23 member countries rather than a formal institution.

1950: Formal U.S. withdrawal from the ITO concept as the U.S. administration abandons efforts to seek congressional ratification of the ITO.

1951–86: Periodic negotiating rounds occur, with occasional discussions of reforms of GATT. In the 1980s, serious problems with dispute resolutions arise.

1986–94: The Uruguay Round, a new round of trade negotiations, is launched. This culminates in a 1994 treaty that establishes the World Trade Organization (WTO).

1995: The WTO is created at the end of the Uruguay Round, replacing GATT.

2003: The WTO consists of 146 members, accounting for approximately 97 percent of world trade.

By the late 1940s, representatives of the American government had met several times with representatives of other major nations to design a postwar international trading system that would parallel the international monetary system. These meetings had two objectives: 1) to draft a charter for the ITO and 2) to negotiate the substance of an ITO agreement, specifically, rules governing international trade and reductions in tariffs. Although a charter was drafted, the ITO never came into being. By 1948, support for yet another international organization had waned in the U.S. Congress. Without American participation, the institution would have been greatly weakened and, in the event, the effort to create an organization to manage problems relating to international trade was abandoned.

However, although the U.S. Congress would not support another international institution, in 1945 it had given the U.S. president the authority to negotiate a treaty governing international trade by extending the 1934 Reciprocal Trade Agreements Act. This led to the establishment of the General Agreement on Tariffs and Trade (GATT) in 1947—a treaty whereby 23 member countries agreed to a set of rules to govern trade with one another and maintained reduced import tariffs for other members.[4] The GATT treaty did not provide for a formal institution, but a small GATT Secretariat, with a limited institutional apparatus, was eventually headquartered in Geneva to administer various problems and complaints that might arise among members.

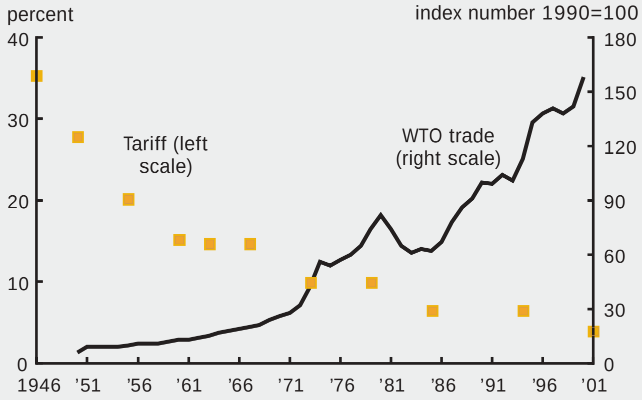
Over the next 40 years, GATT grew in membership and in its success at reducing barriers to trade. GATT members regularly met in what came to be known as *negotiating rounds*. These rounds were primarily focused on negotiating further reductions in the maximum tariffs that countries could impose on imports from other GATT members. The success of these rounds is evident (see figure 1). Tariffs on manufactured products fell from a trade-weighted average of roughly 35 percent before the creation of GATT in 1947 to about 6.4 percent at the start of the Uruguay Round in 1986.[5] Over the same time period, the volume of trade among GATT members surged: In 2000 the volume of trade among WTO members stood at 25 times its 1950 volume. This growth in the volume of trade is impressive and appears to have accelerated in recent decades (see figure 2). Comparing the growth of world GDP, expressed as an index number, to the growth of the volume of trade among GATT/WTO members, also expressed as an index number, figure 2 shows that while trade grew more slowly than world GDP in the early years of the GATT/WTO, in recent years it has outpaced GDP growth.

Despite this success, by the 1980s several problems had surfaced with the GATT apparatus. Firstly, the dispute resolution mechanism of GATT was not functioning as effectively as had been hoped. Countries with longstanding disagreements were unable to reach any sort of resolution on a number of issues, ranging from government subsidies for exports to regulations regarding foreign direct investment. Secondly, a number of commodities, most importantly, agricultural products and textiles, were widely exempt from GATT disciplines. Thirdly, it was widely believed that certain forms of administered trade protection—antidumping duties, voluntary export restraints, and countervailing duties—were restricting trade and distorting trade patterns in many important sectors. Fourthly, trade in services was expanding rapidly and GATT had no rules regarding trade in services. Fifthly, countries that produced intellectual property—movies, computer programs, patented pharmaceuticals—were becoming increasingly frustrated by the lack of intellectual property protection in many developing nations. Lastly, the rules regarding trade-related investment measures—for example, domestic purchase requirements for plants built from foreign direct investment—were hotly disputed.

To address these problems, a new round of trade negotiations—the Uruguay Round—was launched in 1986. The goals of the Uruguay Round were far more ambitious than in previous rounds. It sought to introduce major reforms into how the world trading system would function.

FIGURE 1

Growth of trade among WTO members and the decline of tariffs, 1946–2001



Sources: Tariff rates—Hoekman and Kostecki (1995); WTO trade—World Trade Organization (2001).

The treaty negotiated during the Uruguay Round, the GATT treaty of 1994, established the WTO—the international institution to govern trade that was first visualized by the attendees of the Bretton Woods Conference 50 years earlier. The new GATT treaty provided for an entirely new and different dispute resolution mechanism to eliminate the gridlock of the old system. Furthermore, the Uruguay Round expanded GATT's authority to new areas—agreements regarding trade in textiles, agriculture, services, and intellectual property were major achievements. Finally, new sets of rules regarding administered protection came into effect with the creation of the WTO in 1995.

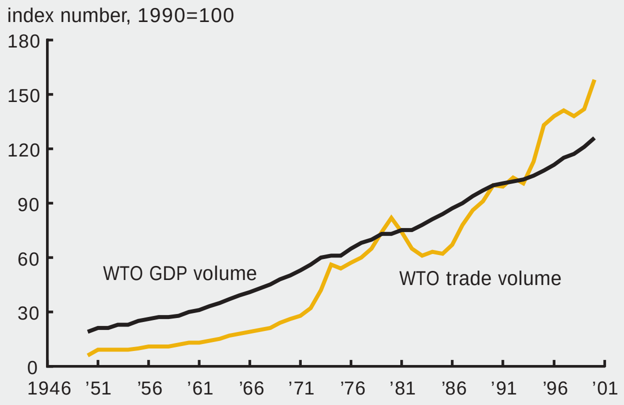
Fundamental principles of the GATT / WTO system

The success of GATT as a dynamic institution that has fostered dramatic increases in worldwide trade lies in its founding principles of reciprocity and nondiscrimination. Reciprocity refers to the practice that occurs in GATT negotiating rounds, whereby one country offers to reduce a barrier to trade and a second country "reciprocates" by offering to reduce one of its own trade barriers. Reciprocity, the practice of swapping tariff concessions, facilitates the reduction of trade barriers. *Nondiscrimination*, or equal treatment, means that if one GATT member offers a benefit or a tariff concession to another GATT member, for example, a reduction in its import tariff for bicycles, it must offer the same tariff reduction to all GATT members. Thus, nondiscrimination extends the benefits of a reciprocal tariff reduction beyond the two parties that initially negotiated it to all GATT members. Papers by Bagwell and Staiger (1999, 2001) argue that, together, these principles work toward increasing the efficiency of the world trading system.

Why is reciprocity important in reducing barriers to trade? Don't countries benefit by unilaterally reducing

FIGURE 2

Growth in volume of trade and total GDP among WTO members, 1950–2000



Source: World Trade Organization (2001).

their tariffs because lower tariffs lead to lower domestic prices? They may, but economic theory teaches us that it depends on the size of the country.

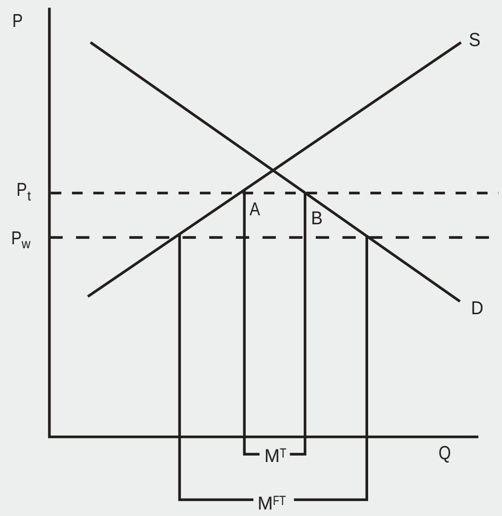
Trade theory teaches us that import tariffs are another type of tax. As a tax, tariffs raise the price that consumers must pay for a good, provide tax revenue to the government, and have the potential to create distortions, or inefficiencies, in consumption and production decisions.

If a country is very small, it will benefit by unilaterally lowering its tariffs, and reciprocity is not an important consideration (see figure 3). This is because small countries are unable to affect the prices of goods on the world market. If a small country suddenly decided to impose a 25 percent tariff on imports of automobiles, this would not affect the worldwide price at which automobiles trade. The tiny decrease in worldwide demand caused by this country's new tariff would be miniscule compared with the demand for automobiles in large markets like the U.S., the EU, and Japan. However, this tariff would make the small country worse off. Although the country's government may now collect more tariff revenue (area A in figure 3), consumers would have to pay a higher price, resulting in a loss of welfare to consumers, and there would be an efficiency loss due to the "consumption distortion" of the tariff (area B in figure 3)—fewer cars would be purchased overall. Thus, the optimal trade policy for small countries is to charge no import tariff. Regardless of the trade policies of its trading partners, a small country should engage in free trade.

The story is a bit more complicated for large countries or customs unions like the U.S. and the EU. Reciprocity is important when large countries are thinking about changing their trade policies (see figure 4). Because import demand in a large country will comprise a large share of worldwide import demand (MD in figure 4), any change in a large country's demand for a good will have an effect on that good's price on the world market. Specifically, when a large country's government imposes a tariff, this reduces the quantity of imports demanded and, consequently, causes the world price to fall. In figure 4, this is reflected in the decline in the world price from P_w to P_t^*. When the price of a country's import good falls on the world market relative to the price of the goods it exports, this is called a terms-of-trade improvement. A terms-of-trade improvement makes a country better off because it can buy imports at a relatively cheaper price on the world market. Although consumers pay a higher price for the imported good than they would under free trade, the importing country's total welfare is higher because

FIGURE 3

Impact of a tariff on a small country



P = Price
Q = Quantity
S = Supply
D = Demand
P_t = Price with tariff
P_w = World price
M^T = Imports under tariff
M^{FT} = Imports under free trade
A = Tariff revenue
B = Consumption distortion

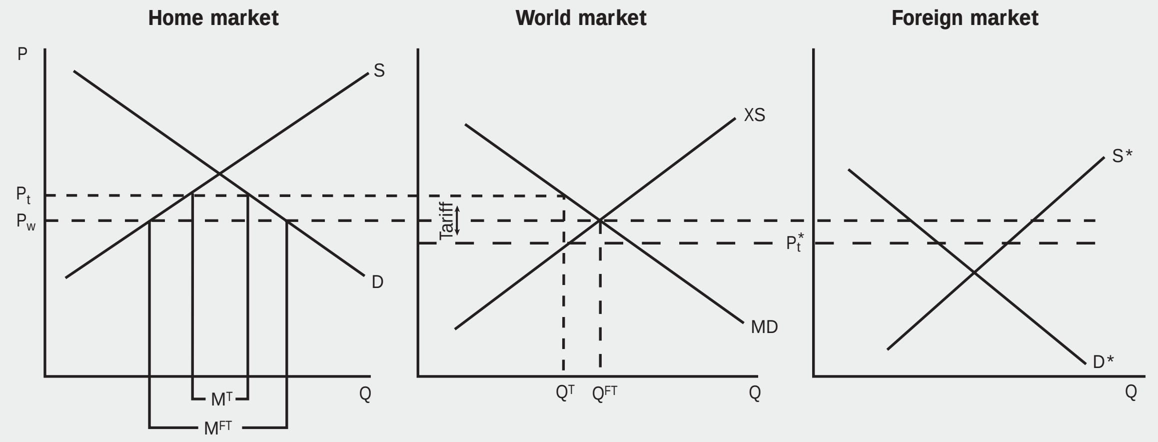
the government earns tariff revenue and because import-competing producers earn higher profits.

Another way to think about a large country's use of tariffs is to focus on the question of who bears the cost of this tax. Although the consumers in a large country must pay a higher final price for the imported good (P_t rather than P_w) when their government imposes a tariff, they don't bear the full tax burden of the tariff. A tariff that causes the world price of a good to fall hurts the foreign exporters that produce that good, because they only receive P_t^* instead of P_w. As a whole, the exporting country loses some of its purchasing power on the world market in this worsening of its terms of trade. In this way, some of the cost of the tariff is pushed onto the foreign producers of the good in the form of the lower price they receive for their product than they would under free trade. Because foreign producers lose out under this import tariff, it is sometimes called a beggar-thy-neighbor policy.

The use of a beggar-thy-neighbor tariff by a large country not only makes the importing country strictly better off and the exporting country strictly worse off, it introduces inefficiencies into the world trading

FIGURE 4

Impact of a tariff on a large country



P = Price
Q = Quantity
S = Supply
D = Demand
XS = Export supply

MD = Import demand
P_t = Price with tariff
P_w = World price
M^T = Imports under tariff

M^{FT} = Imports under free trade
Q^T = Imports under tariff
Q^{FT} = Imports under free trade
* indicates foreign.

system that cause the net effect of the tariff to be negative. The import tariff induces inefficient production distortions in both countries. The level of production is too high in the importing country and too low in the exporting country relative to what the levels would be under free trade. However, although the tariff is bad for the world as a whole, it remains a desirable and beneficial policy for the importing country. At the end of WWII, many of the large countries that became the original members of GATT had high tariffs. They found themselves in what economists call a terms-of-trade-driven prisoner's dilemma. The prisoner's dilemma is a famous problem in the field of game theory that describes a situation in which two parties can improve their situations by acting cooperatively, but the individual incentives they face lead them to act noncooperatively.

Figure 5 provides a highly stylized example of the terms-of-trade-driven prisoner's dilemma faced by two large countries—America and a foreign country—at the end of WWII. We can read the figure as follows. The horizontal rows depict the policy options available to America—free trade with the foreign country or charging a beggar-thy-neighbor tariff. The vertical columns represent the policy options available to the foreign country—free trade or a beggar-thy-neighbor tariff. The numerical entries in the four boxes show the payoffs that each country will receive if the different policy options are taken. The first number represents America's payoff; the second, the foreign country's. For example, the box in the lower left-hand corner tells us that if the U.S. imposes a beggar-thy-neighbor tariff and the foreign country practices free trade, the U.S. will receive a payoff of 15 and the foreign country receives nothing. In the upper left corner, if both countries practice free trade, then the worldwide payoff of 20 (the sum of America's payoff and the foreign country's payoff) is higher than under any other set of policy options. However, in this example, both countries want to avoid being the dupe that practices free trade and faces a beggar-thy-neighbor tariff. Thus, in equilibrium, each country charges a beggar-thy-neighbor tariff and receives the low payoff of 5.

As in the stylized example in figure 1, the problem facing countries at the end of WWII was that they knew that they would collectively be better off under

FIGURE 5

The prisoner's dilemma

		Foreign country	
		Free trade	BTN tariff
America	Free trade	10, 10	0, 15
	BTN Tariff	15, 0	5, 5

free trade. Although each country benefited from its own import tariff, it also suffered at the hands of its trading partners' import tariffs. What was needed was a mechanism by which countries could jointly commit to tariff reductions that would reduce the losses due to production and consumption distortions and, through gains in efficiency, make all countries better off.

GATT, through its practice of reciprocal tariff reductions, provided the necessary mechanism for countries to commit to freer trade. Under GATT, large countries that reduced their import tariffs would experience a net gain because their trading partners would simultaneously reduce their import tariffs. In all countries, the reallocation of labor and capital away from protected import-competing firms and toward export sectors would generate real efficiency gains.

It is evident that reciprocity is necessary for two large countries to engage in trade liberalization, but this could have been achieved with a network of bilateral treaties.[6] Why did GATT adopt a multilateral approach with a strict requirement for nondiscrimination?

Nondiscrimination is a convenient way to reduce the complexity of international trading relations. On a purely practical level, it may be easier to negotiate one set of import tariffs than to engage in dozens of bilateral agreements. In fact, Jackson (1997) speculates that when nondiscrimination, or "most-favored-nation," clauses were originally introduced into trade treaties in the sixteenth century, they had a practical benefit—drafters did not have to copy large sections of treaties again and again.

However, while convenience and practicality are important, nondiscrimination would not have become a central feature of GATT if it did not yield real economic benefits. Nondiscrimination in tariff policy, that is, setting the same tariff on imports from all countries, ensures that resources are allocated to their most productive use. On the import side, nondiscrimination ensures that countries purchase imports from the lowest-cost source country. Further, nondiscrimination prevents *trade re-routing*, in which goods are moved through third countries in order to circumvent high tariffs. Lastly, Bagwell and Staiger (2003) show that, on the export side, nondiscrimination protects exporting countries from *bilateral opportunism*.

As an importer, a country can charge a single nondiscriminatory tariff on imports from all countries or it can set different tariffs on imports from different countries. Under a nondiscriminatory tariff, imports will be sourced from the lowest-cost producer in the world. Compare this to a system of discriminatory tariffs in which, for example, the U.S. sets a lower, preferential tariff on T-shirts from Mexico than on T-shirts from China. If China can produce T-shirts more cheaply than Mexico, but the tariff on Chinese T-shirts is so much larger than the tariff on Mexican T-shirts that it is cheaper for Americans to buy T-shirts from Mexico, there is a real loss due to the production distortions caused by the U.S.'s discriminatory tariffs. Resources in Mexico that could have been better employed in some other sector are utilized in its relatively high-cost T-shirt industry. Resources in China that could have been efficiently used to make T-shirts are allocated to another industry. When a country uses a nondiscriminatory tariff, this facilitates the allocation of resources worldwide to their most productive uses.

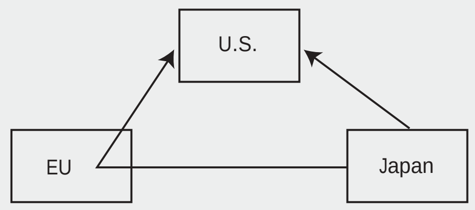
Trade re-routing is a costly practice whereby an exporter ships its goods to a third country, repackages it, and then ships it to a final destination where it will qualify for the third country's lower, preferential tariff rate (see figure 6). In some cases, in order to qualify for the preferential tariff, the product must undergo a *substantial transformation* in the third country. This sometimes leads firms to move a stage of the production process to the third country. When an importing country utilizes a single nondiscriminatory tariff for all imports, there is no need for exporters to engage in the costly process of re-routing.

When two countries bilaterally negotiate tariff concessions, the principle of reciprocity implies that the tariff reductions on various products are balanced in such a way that the terms of trade between the two countries remain unchanged (that is, neither country is "beggaring" the other), while the volume of trade increases to a more efficient level. However, in a world in which both countries remain free to negotiate an additional trade agreement with a third country, the problem of bilateral opportunism arises. For example, if one country were later to offer a lower tariff rate to a third country, this could erode the value of the original tariff concession to the first trading partner. Bagwell and Staiger (2003) have shown that when negotiations utilize the practices of reciprocity and nondiscrimination, the problem of bilateral opportunism is eliminated.

In summary, GATT's founding principles of reciprocity and nondiscrimination facilitate increases in well-being for the countries that belong to the WTO. By coordinating tariff reductions among large countries, GATT makes efficiency gains from trade a reality. By requiring that countries set nondiscriminatory tariffs, GATT facilitates the production of goods in the most efficient location. However, a number of exceptions to GATT's nondiscrimination rule exist. In the next section, I explore these exceptions and why GATT allows the use of discriminatory tariffs in special circumstances.

FIGURE 6

Trade re-routing



Exceptions to GATT's nondiscrimination principle

Although nondiscrimination is an ideal in GATT, in practice a number of exceptions to this general rule exist. *Regional trade agreements*—both free trade areas and customs unions—are allowed. Governments may also use *administered protection*—special tariffs that can be used for particular purposes. Both types of exceptions create both problems and benefits for the world trading system.

Regional trade agreements

In 1947 when negotiators drafted the original GATT treaty, they recognized that from time to time, some countries might want to push ahead with greater trade liberalizations. Although GATT preferred nondiscriminatory tariffs, it did not intend to impede the gains from trade that could be had if only a few members were willing to reduce their tariffs even further. Therefore, it allowed the formation of two types of regional trade agreements—free trade areas and customs unions. In a free trade area, the members maintain their original external tariffs with the rest of the world, but engage in free trade with one another. In a customs union, all member countries set the same external tariff for imports from non-members and eliminate the tariffs on imports from members. When GATT members form a customs union, the common external tariff can be no higher than a weighted average of the tariffs of the member countries before the customs union was formed.

From the beginning, the decision to allow regional trade agreements within GATT was controversial. Viner (1950) framed the question as an essentially empirical one: Were regional trade agreements "trade creating" or "trade diverting?" He coined the term "trade creation and trade diversion" to describe what happens when several countries join together to form a regional trade agreement (RTA). The reduction in tariffs among RTA members leads to trade creation among members. The problem is that the trade that develops between RTA members may not reflect an overall expansion of a country's imports, but rather a diversion of trade away from a non-RTA country to a RTA member. In this case, there may be no worldwide efficiency gains from trade if the non-RTA country is the lowest-cost producer of some good.

Today, the question of whether regional trade agreements are trade creating or trade diverting remains unresolved. In fact, it is almost impossible to answer this question definitively because economists never observe the appropriate benchmark for estimating the amount of trade creation and trade diversion associated with a regional trade agreement. Because economies and trade are always growing, it is hard to construct a counterfactual estimate of how much trade would have grown among RTA members if these countries had not formed a regional trade agreement.

Sampson (1996) argues that the question of trade creation and trade diversion is much less important today than it was 50 years ago because tariffs today are much lower. For the U.S. and the EU, most products face import tariffs of less than 5 percent. Therefore, Sampson argues, although RTA members with these countries do benefit from a 0 percent tariff rate, the size of this *tariff preference*—the difference between the tariff for RTA members and other countries—is so small that it cannot possibly induce much trade diversion.

Sampson's argument finds some support in a number of recent papers that have tackled this question using highly disaggregated data on commodity trade. Both Romalis (2002) and Clausing (2001) examine trade creation and diversion in the context of the North American Free Trade Agreement (Nafta). Both papers find that Nafta created substantial amounts of trade, but Romalis also finds evidence that Nafta may have induced substantial trade diversion when tariff preferences are very large. Prusa (2001) and Bown and Crowley (2003b) focus on deviations from GATT's nondiscrimination rule that arise when the U.S. imposes country-specific antidumping duties. The tariff preference associated with antidumping duties is very large and, thus, these papers find strong evidence of trade diversion. Prusa finds that antidumping duties lead the U.S. to source its imports from countries that face a lower import tariff. Bown and Crowley (2003b) focus on what happens to the exports of a country that faces a country-specific antidumping duty. They find a substantial "trade deflection" effect—exports are diverted to countries with lower import tariffs. Overall, the empirical literature finds evidence that trade diversion occurs. However, the debate over the relative magnitudes of trade creation and diversion continues.

A different but related body of research examines whether regional trade agreements are "building blocks" or "stumbling blocks" (Bhagwati, 1992) on the path to worldwide free trade. A theoretical paper by Bagwell and Staiger (1997a) on free trade areas and papers by Ethier (1998) and Freund (2000) argue that regional trade agreements are building blocks that can facilitate greater multilateral tariff reductions or higher global welfare. However, research on customs unions by Bagwell and Staiger (1997b) and research on regional trade agreements by McLaren (2002), Levy (1997), and Bond and Syropoulos (1996) supports the idea that regional trade agreements are stumbling blocks.

All these papers explore how productive resources are reallocated across countries and/or across sectors within a country when multilateral and regional trade agreements are formed. In the models of Bagwell and Staiger (1997a), Ethier (1998), and Freund (2000), the reallocation of resources that accompanies the formation of an RTA creates a situation where further reallocation under a multilateral agreement is feasible and welfare enhancing for everyone. In contrast, in Bagwell and Staiger (1997b), Levy (1997), McLaren (2002), and Bond and Syropoulos (1996), changes in the economy that result from the formation of a regional trade agreement inhibit further multilateral trade liberalization.

Administered trade protection

While RTAs were permitted by GATT because at least some believed that they could facilitate greater worldwide trade, administered trade protection—temporary tariffs that are usually discriminatory—was allowed for a variety of reasons.

The term *administered protection* refers to trade restrictions that provide protection from imports above and beyond the protection afforded by the tariffs that were negotiated as part of GATT. GATT permits the use of *antidumping duties*, *countervailing duties*, *safeguard measures*, and tariffs to assist with balance of payments problems.[7] *Voluntary export restraints* are an administered trade barrier that is technically no longer allowed within the WTO but was popular in the 1980s. The use of these trade policies represents a deviation from GATT's principle of nondiscrimination. Antidumping duties, which are imposed at the country or firm level, are probably the most discriminatory. GATT requires that safeguard measures be nondiscriminatory, but in practice many countries apply them in a discriminatory manner.

Economics research that seeks to rationalize the inclusion of the various forms of administered protection in the WTO explores the argument that administered protection either 1) improves worldwide welfare or 2) improves the welfare of politically powerful importing countries and, especially, their import-competing sectors. The first argument is that administered protection can create a net benefit for the world as a whole. The protection may make some countries better off and others worse off, but if we add up the gains and losses to everyone in the world, the sum total is positive. In other words, the gains of temporary trade protection outweigh the losses. The second argument is partly political and partly economic. Some group profits from the use of administered protection. Even though protection may reduce worldwide welfare, it is included in GATT because those who benefit wield enough political power to see that it remains within the agreement. Furthermore, recall from the discussion of reciprocity and the terms-of-trade-driven prisoner's dilemma above that large countries benefit when they unilaterally impose beggar-thy-neighbor tariffs. Although countries may use GATT to arrive at a cooperative welfare-enhancing outcome, they still may be tempted to cheat and reimpose beggar-thy-neighbor tariffs. The different forms of administered protection could provide an avenue for doing this.

Next, I provide some background information on safeguards, antidumping duties, and countervailing duties and review the economic research on these different trade policy instruments.

Safeguards

A safeguard measure is a temporary tariff or quota that is used to protect a domestic industry from "fair" foreign competition.[8] Whereas antidumping and countervailing duties are intended to "level the playing field" when foreigner exporters have an "unfair" advantage over domestic producers, safeguard measures may be used against foreign exporters that have a fair competitive advantage in a product.

The use of safeguards first began in the 1940s when the U.S. began to pursue a liberal trade agenda. Fearing that the lowering of a tariff on some particular good as part of a trade agreement could result in a larger-than-expected import surge that would hurt domestic firms, the U.S. government insisted that a safeguard provision be part of every trade treaty that it signed. Under GATT, when members negotiated reciprocal tariff concessions, they committed themselves to maximum tariffs. These commitments restricted, to a considerable extent, a domestic policymaker's authority to unilaterally raise tariffs at some later date.

To encourage countries to make greater concessions during negotiations, GATT included two provisions under which countries could reintroduce protective trade policies. Countries remained free to temporarily raise a tariff above the maximum level or introduce a temporary quantitative restriction under the Article XIX safeguard provision. Countries wishing to permanently raise their tariffs could do so under Article XXVIII.

According to GATT's Agreement on Safeguards, safeguard measures should be nondiscriminatory, but in fact countries often use discriminatory safeguards. This practice is contentious and frequently challenged before the WTO's dispute settlement body. For example, the recent U.S. Global Steel Safeguard raised the import tariff on steel for many countries, but granted exemptions for steel imports from many of our free trade partners like Canada and Mexico. The WTO's dispute settlement body recently announced that these exemptions are violations of GATT's rules.[9]

Other GATT rules specify that safeguards should only be used when imports increase unexpectedly or as the result of unforeseen developments. This leads to numerous debates over what developments can be classified as "unforeseen." Prior to the Uruguay Round's revisions to the safeguard rules in 1994, the use of a safeguard measure was subject to measured retaliation. If a country imposed a safeguard on a product, its trading partners that were hurt by the safeguard could retaliate with their own tariff increases on other products. As part of the Uruguay Round reforms, the safeguard rules changed so that safeguards are no longer subject to retaliation for the first three years they are in effect. This rule change was intended to make nondiscriminatory safeguards more attractive for protection-seeking governments relative to discriminatory antidumping duties.

The economics literature provides several different rationales for why the WTO allows the use of safeguards. Perhaps the most widely cited argument for safeguards is that their existence can facilitate greater tariff liberalization by governments during trade negotiations. Because a government has an escape valve if a tariff reduction causes pain to its own producers, it has more freedom to make larger and potentially more risky tariff reductions. Because there are large gains from permanent tariff reductions and relatively small costs from imposing temporary safeguards in a few sectors, the world gains by having safeguards in a trade agreement, even when they are not actually used.

A paper by Ethier (2002) formalizes this basic idea. His central concern is to analyze a trading system like the GATT/WTO, which is characterized by the general practice of negotiating tariff reductions to benefit all members and the occasional use of temporary unilateral tariff increases through safeguards or antidumping duties. He develops a model in which countries grow at different rates. The key insight is that when countries negotiate tariff reductions, they do not know if their growth will be fast or slow. In a trade agreement that does not allow temporary tariff increases, countries fear their growth will be slow and will negotiate only small tariff reductions. When safeguards are added to the trade agreement, countries negotiate large tariff reductions because they know that if they turn out to have slow growth, they can temporarily increase their tariffs.

Klimenko, Ramey, and Watson (2002) arrive at a similar result by examining the question of why the WTO's dispute settlement body (DSB) exists. In their paper, they show that when countries regularly renegotiate their tariffs, as in the WTO's trade rounds, a DSB is necessary for the trade agreement to survive. A DSB makes it possible for countries to punish each other for violations. Because countries want to avoid punishment, they won't violate the trade agreement when it includes a DSB. As an extension to their paper, they also show that if the DSB allows countries to temporarily raise their tariffs (as is the case with safeguard measures) in response to some unexpected change in the economic environment, they will negotiate larger tariff reductions initially.

Although some of the theoretical arguments suggest safeguards help facilitate trade liberalization, other economists arrive at the opposite conclusion. Staiger and Tabellini (1987) show that allowing for safeguard measures could reduce the credibility of a trade agreement. From this perspective, the inclusion of a safeguard measure can weaken the overall agreement.

On the other hand, another economic argument in favor of the inclusion of safeguards is that they act as a form of insurance against fluctuations in the terms of trade. Consider a country that imports a good whose price fluctuates substantially. When prices change, the economic environment can become so different that countries want to pull out of a trade agreement that constrains them to set low tariffs.

Bagwell and Staiger (1990) explore how price fluctuations affect large players in a trade agreement—countries or regions like the U.S., the EU, and Japan with such large markets that their safeguard measures can significantly alter world prices. They argue that due to the self-enforcing nature of the trade agreement, in periods of large import volumes, a safeguard measure acts as a pressure valve to enable countries to sustain cooperation by temporarily raising tariffs.
In the absence of a safeguard clause, countries would not be able to sustain cooperation, and the result

would be a costly trade war with high levels of tariff retaliation. Fischer and Prusa (1999) show that even small countries, which cannot affect world prices by imposing a safeguard, can use safeguards to insure themselves against international price shocks.

To date, empirical research in economics hasn't been able to prove or disprove the ideas put forth in the papers mentioned above. In some ways this is an impossible task—how can we prove that countries negotiate lower tariffs when a safeguard is part of a trade agreement when all the trade agreements in existence include safeguards?[10]

Another important area of research argues that the WTO allows the use of safeguards because of concern for the interests of importing countries and their import-competing firms and industries. Safeguards may exist because the agents that benefit from the safeguards are politically powerful. Many of these papers focus on analyzing how the politically powerful agent gains from the safeguard. If one country pursues a policy that benefits itself but harms other countries, economists want to understand how and why the policy creates a benefit so that they can develop alternative policies that create the same or a similar benefit but reduce or eliminate the harm to others. I examine three arguments for why governments use safeguards to assist import-competing industries: to help them catch up to their foreign competitors, to facilitate their exit from the industry, and to reap the gains for a politically preferred sector.

Several theoretical papers (Matsuyama, 1990; Miyagiwa and Ohno, 1995, 1999; and Crowley, 2002) explore how safeguards benefit import-competing firms that are technologically behind their foreign competitors. These papers examine the consequences of using a temporary safeguard to induce domestic firms to adopt newer, more efficient production technologies. Economists have long understood that a government subsidy is better than a tariff for helping a firm adopt a new technology.[11] A direct subsidy can achieve the same result as a safeguard, but because it doesn't increase the price consumers will face, it is less costly to society as a whole. Thus, using a safeguard to facilitate technological improvement is a "second-best" policy at best.

Matsuyama (1990) and Miyagiwa and Ohno (1995) provide theoretical support for the WTO's practice of setting a strict termination date for safeguard protection and allowing exporting countries to retaliate against safeguard measures that extend beyond this limit. Miyagiwa and Ohno (1995) find that safeguards provide an incentive for protected firms to innovate quickly only if the cost of the new technology is falling over time and the termination date for safeguard protection is credibly enforced by foreign retaliation. Crowley (2002) finds a nondiscriminatory safeguard tariff can accelerate technology adoption by a domestic import-competing firm, but will slow down technology adoption by foreign exporting firms. Because a nondiscriminatory safeguard tariff can delay a foreign firm's adoption of new technology, its worldwide welfare costs may exceed its benefits.

Unfortunately, the little empirical evidence on the effect of safeguards on technology adoption is not very encouraging. A 1982 study by the U.S. government's administrative body that reviews safeguard petitions, the U.S. International Trade Commission (USITC), found that most safeguards failed to promote a positive adjustment to import competition. Rather than assisting companies in upgrading their facilities, in most cases safeguards merely slowed an industry's inevitable decline. There are some exceptions; Harley-Davidson, a motorcycle producer, received safeguard protection in 1983 and successfully retooled its plants. However, successful cases are the exception to the rule. A review of U.S. safeguard cases since 1974 shows that some industries seek and receive protection repeatedly—for example, stainless alloy tool steel was granted safeguard protection in 1976 and again in 1983.

Another group of theoretical papers shows how firms in declining industries can utilize political support to maintain protection. Hillman (1982), Brainard and Verdier (1994, 1997), and Magee (2002) all examine the use of tariff protection to allow a dying industry to collapse slowly rather than quickly. Because these papers all assume that there are high costs to quickly scaling back production, they find that a temporary tariff that can slow an industry's decline can improve an importing country's welfare. However, this type of policy also slows the reallocation of capital and labor into other industrial sectors in which they would be more productive. This loss of productivity is an indirect welfare cost on the country imposing the safeguard measure.

In summary, there are a number of potential reasons GATT allows the use of safeguard measures. Most of these papers do not explore the issue of nondiscrimination. The one paper that does, Crowley (2002), finds that a safeguard can only benefit the importing country if the measure is nondiscriminatory.

Antidumping duties

Antidumping duties are a controversial form of temporary trade protection permitted by GATT. An antidumping duty is a tariff that an importing country imposes on imports of a product that have been *dumped* into its domestic market by some exporting country's firm(s). An importing country may only impose an antidumping duty on a product if there is evidence that foreign firms have sold their products at less than normal value and this has injured the domestic industry.

Historically, antidumping duties have been distinguished from other forms of administered protection by the trade problem they were used to remedy. Antidumping duties were a government's remedy for "unfair" trade and were intended to offset the price undercutting of foreign exporters engaged in anticompetitive practices. In the early twentieth century, the U.S. instituted an antidumping law to protect its domestic firms from German cartels that sold their excess output at low prices in the U.S. market. Although low prices for imported goods improve the well-being of a country and should be welcomed by the government, in some cases they could present a problem. If a foreign firm is engaging in predatory pricing—setting prices low in order to drive competitors out of business—this could lower the welfare of a country in the long run. This can happen if the foreign firm becomes a monopolist and uses its monopoly power to charge consumers extremely high prices. GATT's Antidumping Code allows countries to violate the nondiscrimination rule and impose an additional tariff—an antidumping duty—on imports from a firm that is dumping. Thus, one could view GATT's antidumping rules as an effort to improve worldwide welfare by preventing the harmful practice of predatory pricing. However, although most economists would agree that an anticompetitive practice like predatory pricing is harmful, there is almost no evidence of this type of practice in alleged incidences of *dumping*.

Rather, in almost all modern cases of dumping, foreign firms are either engaging in international price discrimination or temporarily pricing below their average cost of production. In fact, GATT now defines dumping as either international price discrimination—that is, charging different prices for a good in different countries because demand for the good is different in the different countries—or as pricing below the average cost of production. Prior to the Uruguay Round reforms, antidumping duties had no effective time limit. Once an antidumping duty was put in place, it could remain in place for years. Today, antidumping duties are subject to "sunset reviews" every five years. During a sunset review, a duty is removed unless there is evidence that the targeted country continues to dump and this dumping is hurting domestic firms in the importing country.

One peculiarity of GATT's Antidumping Code is that it encourages the use of *price undertakings* in place of an antidumping duty. Economists view price undertakings with suspicion because they look a lot like government-sanctioned collusive pricing. Because collusive pricing—a practice in which several firms agree to simultaneously raise prices and keep them high—hurts consumers, it is surprising that GATT would encourage this type of practice. It is hard to justify on economic welfare grounds.

Although the rhetoric that surrounds the use of antidumping duties focuses on whether foreign firms are behaving "fairly," the important question is not whether dumping is fair but whether dumping is harmful. Thus, to understand how antidumping policy affects the world trading system, economists first ask why firms engage in practices like pricing below the average cost of production.

With antidumping investigations into goods as varied as fresh-cut flowers, semiconductors, and countless varieties of steel, economists have tried to explain the phenomenon of dumping and the government's policy response in terms of the different modes of competition in the markets for dumped goods.

Several papers explain dumping in the context of competitive markets. These papers focus on explaining why competitive firms dump. In Ethier (1982), competitive firms with implicit labor contracts will dump during periods of slack world demand. Essentially, these firms have high fixed costs that lead them to price below their average total cost when demand is weak. Staiger and Wolak (1992) show that a foreign monopolist that faces weak demand in its own market will dump into a perfectly competitive domestic market. In this model, a foreign firm with excess capacity will sell at a price below average total cost in its export market in order to protect its monopoly profits in its own market. Unfortunately, neither Ethier's paper nor Staiger and Wolak's explains how antidumping policy affects the welfare of the importing country. However, another paper that examines dumping in competitive markets, Clarida (1993), finds that antidumping policy reduces an importing country's welfare. In this model, competitive firms dump, that is, sell below average cost, as they learn about their own production technologies during a period of high world demand. The importing country benefits when import prices are low, so the introduction of an antidumping policy that raises prices leaves the country worse off. In summary, the research on dumping in competitive markets suggests that antidumping policy is harmful and cannot provide an economic rationale for its existence.

The literature on dumping in imperfectly competitive markets is somewhat more successful in providing a rationale for why GATT includes an antidumping provision. Markets where there are a small number of large producers—like automobiles—are said to be imperfectly competitive.

Dixit's (1988) seminal paper on dumping in an imperfectly competitive market shows that, in general, when dumping is defined as international price discrimination, it actually benefits the importing country. More specifically, the benefits to consumers of being able to buy goods at low, dumped prices outweigh the losses to domestic producers. Thus, as a general rule, antidumping policy reduces the welfare of importing countries when markets are imperfectly competitive.

However, two papers, Gruenspecht (1988) and Crowley (2002) utilize an alternative definition of dumping—pricing below the average cost of production—and find that this kind of dumping can hurt an importing country. Thus, antidumping duties can help. These papers provide one explanation for why GATT allows antidumping duties.

Gruenspecht (1988) focuses on dumping by firms in industries with steep learning-by-doing curves in production. That is, he models industries like semiconductors where production costs fall as a firm's experience in making the product increases. He shows that an importing country benefits from an antidumping law. In his model, antidumping duties can improve the welfare of a large importing country by increasing the size of the market available to sales by the home firm. Higher production yields greater productivity gains that improve the home country's welfare.

Crowley (2002) focuses on industries in which firms must pay large sunk costs to install capacity, for example, an industry like steel. She shows that when demand for the good fluctuates, foreign firms will dump their output when demand in their own market is weak. In response to this, the importing country can improve its welfare by imposing a temporary antidumping duty until demand in the foreign country returns to a normal level. In this case, the antidumping duty shifts some of the foreign firm's profits back to the home country.

Finally, the paper by Fischer and Prusa (1999) that I discussed earlier in the context of safeguards also provides a rationale for antidumping law. A small country that faces international price fluctuations can use an antidumping duty as a form of insurance against harmful movements in its terms of trade.

In summary, regardless of the degree of competition in a market, it is hard to rationalize the inclusion of antidumping rules in GATT on economic welfare grounds.

Countervailing duties

Countervailing duties, tariffs used to offset the effect of a foreign government's subsidy, are similar to antidumping duties. Because a foreign government's subsidy to an export good lowers its price in the importing country, in most cases a foreign subsidy benefits consumers in an importing country. Thus, in most cases, there is no economic welfare rationale for a countervailing duty policy within GATT.

However, in markets that are imperfectly competitive, a foreign government's subsidy can reduce the welfare of an importing country. In this case, although consumers in the importing country benefit from the subsidy, the losses to firms in the importing country outweigh the benefits to consumers. Dixit (1988), Spencer (1988), and Collie (1991) all show that in this case, a countervailing duty can prevent the foreign government's subsidization of its export good and improve the welfare of the importing country.

In summary, although countervailing duties are likely to lower an importing country's welfare when markets are competitive, it is theoretically possible for them to improve an importing country's welfare when markets are imperfectly competitive.

Dispute resolution in the WTO

Having reviewed the various exceptions to GATT's nondiscrimination rule, I now turn to the issue of disputes. What happens when a dispute arises between countries over a GATT rule? What power does GATT have to settle disputes? How does GATT enforce its own rules?

GATT is a multilateral trade agreement with the authority to regulate the trade regulations of its member governments. As an international treaty, it has no authority over individuals, private firms, or public corporations. Rather, it governs the interactions of countries that voluntarily agree to abide by its rules.

The WTO mediates and settles disputes among its members. Disputes that cannot be resolved among the members themselves are referred to a panel of three persons who act as judges. When a country is found to be in violation of its GATT obligations, it has three choices. It can appeal and have the case retried before an appellate body, it can amend its laws to bring them in line with GATT, or it can keep its laws as they are and face "measured retaliation" from its aggrieved trading partners. If a country loses an appeal, its options revert to amending its laws or facing retaliation. Measured retaliation is the WTO's main enforcement mechanism. In the simplest case, if one country were to violate its GATT obligations by raising its tariff on some good and this tariff increase caused the volume of imports from a second country to fall, the WTO could authorize the second country to punish the first by raising its own tariff on something. This retaliation by the second country is "measured," in the sense that it should reduce trade from the offending first country by roughly the same value as the first country's tariff increase.

The practice of measured retaliation is extremely useful in maintaining the smooth functioning of the world trading system. Historically, when one party to a treaty violated one of its terms, the other party could either accept the violation or withdraw for the treaty entirely. Measured retaliation essentially allows both parties to jointly withdraw from some of their treaty obligations while still enjoying the benefits of the rest of the treaty.

In fact, while the recent increase in disputes among WTO members may, on the surface, appear troubling, it could also signal the effectiveness of the dispute resolution system. It could be that countries that have grievances against their trading partners find the dispute settlement system sufficiently effective that they present their disputes to this body rather than seeking some type of resolution outside the WTO.

Conclusion

This article has provided a brief history of the WTO and has suggested that the success of the GATT and WTO system can be attributed to the founding principles of reciprocity and nondiscrimination. I have also reviewed the numerous exceptions to GATT's principle of nondiscrimination. Although the various exceptions may yield benefits, theoretical and empirical research in economics questions whether the benefits of these exceptions are sufficiently large to outweigh the costs.

The WTO is currently engaged in a new round of trade negotiations—the Doha Round. This article's review of the economics literature suggests that it may be time to rethink GATT's rules for administered protection. The proliferation of antidumping duties is costly to both consumers and many exporters. Many countries that belong to the WTO would like to make it more difficult for countries to impose antidumping duties. However, because antidumping protection is popular among import-competing firms in both the U.S. and the EU, it will be politically difficult to achieve meaningful reform of GATT's antidumping rules. There may be more support for modest changes to the Agreement on Safeguards. For example, the discriminatory application of safeguards has been an issue in many WTO disputes. Negotiators to the Doha Round could potentially preempt future disputes over safeguards by closing some loopholes and clarifying the language in the safeguard agreement.

Perhaps the largest gains that could be achieved in the current negotiating round might come from liberalizing trade in agricultural commodities. Developing countries, many of which have a comparative advantage in agricultural production, would like to see developed countries' agricultural markets open up through both tariff and subsidy reductions. The liberalization of trade in agriculture has the potential to generate huge welfare gains for the entire world.

NOTES

[1]See the WTO webpage at www.wto.org.

[2]Jackson (1997) and Hoekman and Kostecki (1995) provide good histories of the post-WWII world trading system.

[3]For definitions of all terms in italics, see the appendix on p. 55.

[4]Under the GATT treaty of 1947, GATT members were technically known as "contracting parties."

[5]Hoekman and Kostecki (1995), p. 20.

[6]This article has emphasized the importance of reciprocity in trade negotiations. However, large countries could engage in trade negotiations for reasons not considered here.

[7]GATT also permits the use of tariffs to assist with balance of payments problems in developing countries with fixed exchange rates. The balance of payments exception is relatively uncontroversial and I do not discuss it here.

[8]This section draws heavily upon Bown and Crowley (2003a).

[9]See WTO (2003).

[10]A related paper is the recent empirical contribution by Staiger and Tabellini (1999), who compare two different policy environments to investigate the question of whether GATT rules help governments make trade policy commitments. They find evidence to support the claim that GATT rules do give governments commitment power. However, their work also provides support for the theory that the inclusion of an escape clause can have damaging effects that erode a government's ability to commit to liberalization.

[11]Dixit and Norman (1980), Caves, Frankel, and Jones (2002), and Krugman and Obstfeld (2000) are a few standard textbooks that make this point.

APPENDIX: GLOSSARY OF TRADE TERMS

Administered protection: Special tariffs, quotas, or other restrictions on imports that are allowed under GATT. The treaty allows the various forms of administered protection for a variety of reasons, including to enable a country to address specific domestic concerns and to promote macroeconomic stability. Policymakers often refer to administered protection as trade remedies.

Antidumping duty: A tariff used to raise the price of a dumped product.

Beggar-thy-neighbor tariff: A tariff, imposed by a large country, that causes the world price of a good to fall. This fall in the world price benefits importing countries and hurts exporting countries.

Bilateral opportunism: The practice by which one country, after negotiating a bilateral trade agreement with a second country, goes on to negotiate a bilateral trade agreement with a third country that undercuts the benefits that the second country expected to receive under its agreement.

Countervailing duties: Tariffs used to offset the advantage foreign exporters have over domestic producers in cases in which foreign exporters receive subsidies from their governments.

Dumping: Selling a product in an export market at a price below its "normal value." GATT defines normal value as the price a good sells for in its home market or a third country's market, or as the average cost of its production.

Measured retaliation: A mechanism to enforce the WTO rules. If one country violates a WTO rule and the violation reduces trade from a second WTO member country, the WTO may authorize the second country to punish the first country by allowing the second country to violate a WTO rule (for example, by raising a tariff). This punishment should reduce trade from the offending first country by roughly the same amount as the trade reduction caused by the original violation.

Negotiating round: A meeting of GATT/WTO members at which members negotiate reductions in tariffs and/or changes to GATT/WTO trading rules.

Nondiscrimination: The policy of treating all of one's trading partners equally. A country is practicing nondiscrimination if it charges the same tariff on imports of a product (for example, 5 percent on shoes) without regard to where the product is made.

Price undertaking: An agreement whereby a foreign firm accused of dumping agrees to raise its price. If the price increase is large enough, the importing country agrees not to impose an antidumping duty.

Regional trade agreement: An agreement among two or more countries in which the tariffs they impose on one another's goods are lower than the tariffs they impose on goods from other countries. These agreements are also known as preferential trade agreements.

Safeguards: Temporary tariffs, quotas, or tariff-rate quotas that protect an industry from fair foreign competition.

Tariff preference: The difference between a country's nondiscriminatory tariff and the tariff applied to imports from a particular country due to participation in a regional trade agreement or application of a special tariff like an antidumping duty.

Terms of trade: The price of a country's exports divided by the price of its imports. An increase or improvement in the terms of trade raises a country's welfare.

Voluntary export restraint: An agreement whereby an exporting country reduces its exports to some importing country. VERs are also known as orderly marketing agreements (OMAs), voluntary restraint agreements (VRAs), and export restraint agreements (ERAs), among other terms.

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