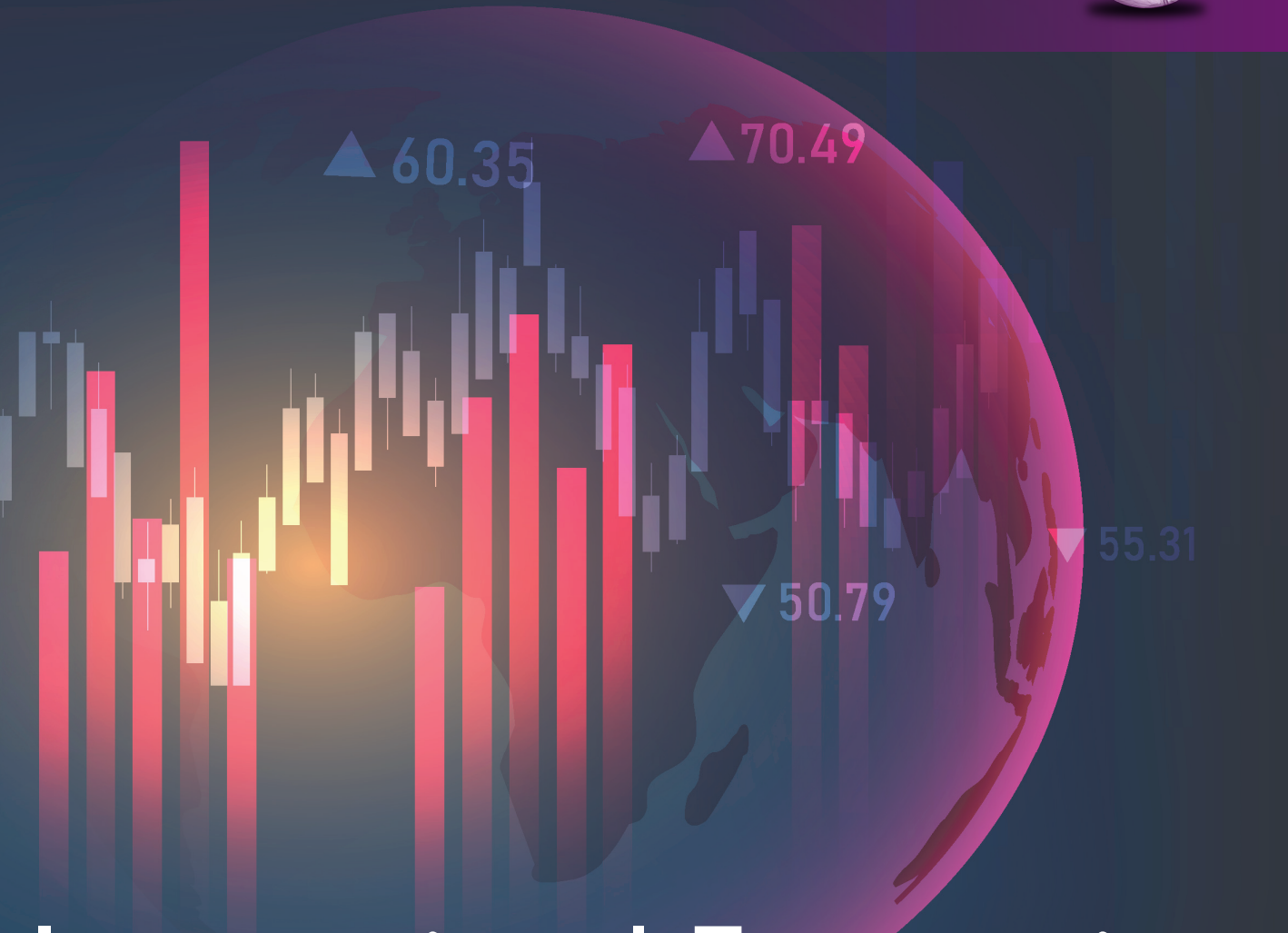
GLOBAL EDITION



International Economics

EIGHTH EDITION

JAMES GERBER

International Economics

James Gerber

San Diego State University

EIGHTH EDITION

GLOBAL EDITION

Pearson

Harlow, England • London • New York • Boston • San Francisco • Toronto • Sydney • Dubai • Singapore • Hong Kong
Tokyo • Seoul • Taipei • New Delhi • Cape Town • São Paulo • Mexico City • Madrid • Amsterdam • Munich • Paris • Milan

succeed in gaining protection, then firms are less likely to engage in that particular form of rent seeking. For this reason, political systems that do not easily provide protective tariffs are much more likely to avoid one source of wasted resources.

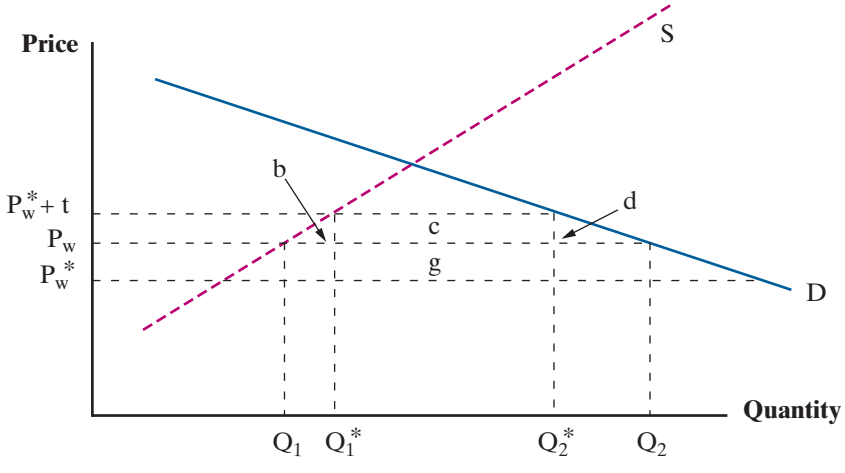
The Large Country Case

Economists distinguish between large and small countries when it comes to tariff analysis. As a practical matter there may not be much difference between the two, but in theory it is possible for large countries to actually improve their national welfare with a tariff as long as their trading partners do not retaliate. In economic terms, a large country is one that imports enough of a particular product so that if it imposes a tariff, the exporting country will reduce its price in order to keep some of the market it might otherwise lose.

An example of the **large country case** tariff is shown in Figure 6.5. Suppose that the United States, a large country, imposes a tariff of size t on its imports of oil. The fall in U.S. demand brought on by the tariff causes P_w, the world price, to fall to P_w*, offsetting some or all of the deadweight loss from the tariff.

Looking more closely at Figure 6.5, we can compare the large and small country cases. The situation before the tariff is the same as the one shown in Figure 6.3. The main difference between the two cases stems from the fact that foreign suppliers cut the price to P_w* after the tariff is levied. Consequently, less additional domestic production occurs, and fewer consumers are squeezed out of the market. In other words, areas b and d in Figure 6.5 are smaller than they would be in the small country case where there is no price drop. A smaller deadweight loss is not the only effect, however. In Figure 6.5, area g represents tariff revenue, which together with area c is the total tariff revenue collected. Compared to the

FIGURE 6.5 Tariffs in the Large Country Case



A tariff in a large country reduces demand so much that foreign producers cut their prices.

pre-tariff situation, however, area g is a net gain to the importing nation. Pre-tariff, area g was part of the money paid for imports. After the tariff, and due to the price decline, it is part of the revenue collected by the government and, hence, stays within the nation.

As long as $g > b + d$, a large country can improve its welfare by imposing a tariff. This outcome, however, assumes that there are no retaliation, rent seeking, or harmful effects on innovation.

EFFECTIVE VERSUS NOMINAL RATES OF PROTECTION

LO 6.2 Use tariff data on inputs and outputs to compare effective and nominal rates of protection.

One of the ironies of tariff protection is that often it is not what it seems. In fact, the amount of protection given to any one product depends not only on the tariff rate but also on whether there are tariffs on the inputs used to produce it. For example, U.S. tariffs on steel and aluminum raised the cost of producing cars and trucks and undermined the tariff protection they received. In order to see this effect more clearly, consider a hypothetical example of a tariff on laptop computers. If American-made laptops have foreign parts in them, then the amount of protection they receive from a U.S. tariff also depends on whether there are tariffs on their imported inputs. It is conceivable that the protection given by a tariff on laptops could be completely undone by tariffs on inputs used to make laptops.

Economists distinguish between the **effective rate of protection** and the **nominal rate of protection**. The nominal rate is what we have discussed so far in this chapter—the rate that is levied on a given product. The effective rate of protection takes into account the nominal rate and any tariffs on intermediate inputs. Consequently, it gives a clearer picture of the overall amount of protection that

TABLE 6.2 Nominal and Effective Rates of Protection

Variable	No Tariff	A 20% Tariff on the Final Product	A 20% Tariff Plus a 50% Tariff on Imported Inputs
Price of a laptop computer	$1,000	$1,200	$1,200
Value of foreign inputs	$600	$600	$900
Domestic value added	$400	$600	$300
Effective rate of protection	0	50%	−25%

Effective rates of protection are higher than nominal rates if intermediate inputs are imported tariff free. If intermediate inputs are subject to tariffs, it reduces the effective rate of protection and can even turn it negative.

any given product receives. The effective rate of protection is related to the concept of value added. Value added is the price of a good minus the costs of the intermediate goods used to produce it. Value added measures the contributions of capital and labor at a given stage of production. The effective rate of protection is defined as follows:

$$(VA^* - VA)/VA$$

where VA is the amount of domestic value added under free trade, and VA^* is the amount of domestic value added after taking into account all tariffs, both on final goods and intermediate inputs.

Consider the example shown in Table 6.2. Suppose that laptop computers sell for $1,000 and foreign producers are willing to sell to the United States all it wants at that price. In order to make a laptop, American manufacturers must import $600 worth of parts, so that a domestic laptop actually has $400 of value added in the United States ($1,000 − $600 = $400). If the United States imposes a 20 percent tariff, then the price rises to $1,200. Value added in the United States is now $600 ($1,200 − $600), and the effective rate of protection is 50 percent (($600 − $400)/$400). That is, a 20 percent tariff provides 50 percent protection! This happens because a large share of the value of the final product is produced elsewhere, so all of the domestic protection falls on the share produced in the United States.

Now consider what happens if the United States decides also to protect domestic component manufacturers and levies a large tariff on intermediate inputs. If the tariff on foreign parts is 50 percent, then the cost of intermediate inputs rises from $600 to $900. With a 20 percent tariff on the value of the final product, the price of imports stays at $1,200, which is the price American laptop makers must meet. Value added with the tariff on intermediate inputs is $300 ($1,200 − $900) and the effective rate of protection is now −25 percent (($300 − $400)/$400). That is, even with a 20 percent tariff on foreign laptops, American laptop makers receive *negative* protection. The tariff on the final product is more than offset by the tariffs on the intermediate products, so that the overall situation leaves producers more exposed to foreign competition than if there were no tariffs levied at all.

Negative rates of effective protection are not uncommon. Part of the reason stems from the fact that tariffs are enacted in a piecemeal fashion over long periods and are not constructed in a planned and coherent way. Pressures from domestic lobbyists, considerations of strategic interests, and numerous other forces go into the shaping of national tariff systems. Consequently, it is not surprising to find contradictory tariff policies where newer tariffs undo the effects of older ones.

This discussion should add a note of caution to attempts to determine exactly which industries are protected. Clearly, the notion of effective rates of protection is more relevant than nominal rates. With tariff rates, what you see may not always be what you get.

CASE STUDY

The Uruguay and Doha Rounds

The Uruguay Round concluded in 1993 after seven years of negotiations. It took three years longer than planned and included one complete breakdown in the talks. The agreement was ratified by most of its 123 participating countries in 1994 and implemented in 1995.

Table 6.3 summarizes the four main outcomes of the negotiations. Trade barriers were reduced through several mechanisms, including tariff reductions, clarification of the rules on subsidies, a number of new areas of agreement, and institutional reforms within the framework of the existing General Agreement on Tariffs and Trade (GATT). Most notably, the Uruguay Round created the WTO as a body to oversee the implementation and further refinement of the various agreements.

One of the main effects on world trade patterns of the Uruguay Round was the negotiation of a separate Agreement on Textiles and Clothing (ATC). Until 1994, textiles and clothing had a separate international agreement, called the *Multi-Fiber Arrangement,* which was a system of quotas and tariffs. Under the ATC, textiles and clothing were integrated into the WTO system, with a complete phase-out of all quotas.

Other notable accomplishments of the Uruguay Round include an extension of rules governing services trade, the General Agreement on Trade in Services (GATS); an agreement on intellectual property enforcement, called Trade-Related Aspects of Intellectual Property Rights (TRIPS); and an

TABLE 6.3 The Uruguay Round

Category	Results
Tariffs	■ Most industrial product tariffs cut by 40 percent ■ Conversion of some agricultural quotas to tariffs
Subsidies	■ Subsidies defined ■ Classifies prohibited and actionable subsidies
New agreements	■ Agreement on Textiles and Clothing (ATC) ■ Trade-Related Aspects of Intellectual Property Rights (TRIPS) ■ Trade-Related Investment Measures (TRIMs) ■ General Agreement on Trade in Services (GATS)
Institutional	■ Creates the World Trade Organization (WTO) ■ Refines the dispute settlement process ■ Implements periodic trade policy reviews

The Uruguay Round included far more than tariff cuts.

(*continued*)

agreement on investment, the Trade-Related Investment Measures (TRIMs) (see the Case Study in Chapter 5 for a discussion of the TRIPS and TRIMS agreements). The Uruguay Round also created the WTO to administer all of the agreements (ATC, GATS, TRIPS, TRIMs, GATT) and initiated a more efficient dispute settlement process. In addition, the WTO conducts periodic reviews of individual country trade policies, which it publishes online.

The Doha Round was launched in 2001 in Doha, Qatar. Although the goal was to reach an agreement by the end of 2005, the talks collapsed in July 2006. They were later restarted and collapsed again, and as of 2016, there is no further progress. Most countries have abandoned the effort to conclude the talks. Not surprisingly, the biggest areas of disagreement were trade barriers and subsidies in agriculture and market access for services. In addition, high-income countries pushed middle-income ones to further reduce their barriers to imports of manufactured goods.

Doha is the first set of trade talks to fail since the signing of the GATT agreement in 1947. Its failure has caused some observers to question the future relevance of the WTO, but as a dispute settlement body it is invaluable. In retrospect, it is not a surprise that it failed to achieve the original goals. Many quotas have been converted to tariff equivalents, and tariffs have fallen, more or less constantly since the signing of the GATT agreement in 1947. As a consequence, issues of deep integration and issues affecting sensitive production sectors such as agriculture have come to the forefront of negotiations. Many of these issues are too contentious for easy resolution, especially in the context of a negotiation by all 162 members. Countries continue to negotiate outside the WTO, but now the focus is often on investor protections, patent issues, and services, and the negotiations are bilateral or plurilateral rather than multilateral through the WTO. These new issues reflect the fact of already low tariffs for many items, and the goal of multinational companies to protect their investments in production centers across the globe. There may not be another WTO negotiation to match the previous rounds, but there are continuing commitments and ongoing negotiations between groups of countries.

ANALYSIS OF QUOTAS

LO 6.3 Compare and contrast quotas and tariffs.

The economic analysis of quotas is nearly identical to that of tariffs. Quotas are quantitative restrictions that specify a limit on the quantity of imports rather than a tax. The net result is much the same: tariffs and quotas lead to a reduction in imports, a fall in total domestic consumption, and an increase in domestic production. The main difference between quotas and tariffs is that quotas that are not followed up with additional policy actions do not generate tariff revenue for the government. The lost tariff revenue can end up in the hands of foreign producers as they raise their prices to match demand to supply. Hence, the net loss from quotas can exceed that from tariffs.

In terms of Figure 6.3, consumers still lose area $a + b + c + d$, but the government does not collect area c as a tax. (We will examine what happens to area c, but try to reason it out for yourself first.)

Types of Quotas

The most transparent type of quota is an outright limitation on the quantity of imports. Limitations are sometimes specified in terms of the quantity of a product coming from a particular country, and at other times there is an overall limit set without regard to which country supplies the product. For example, in the apparel sector, until 2005, the United States set quotas for imports of each type of garment (men's suits, boys' shirts, socks, and so on). The quota for each good was further divided by country; so, for example, Hong Kong and Haiti had different limits on each type of apparel that they could export to the United States.

Another type of quota is an import licensing requirement. The United States uses this form infrequently, but many other nations have relied on these quotas for the bulk of their protection. For example, until 1989, they were the main form of protection in Mexico. As the name implies, import licensing requirements force importers to obtain government licenses for their imports. By regulating the number of licenses granted and the quantity permitted under each license, import licenses are essentially the same as quotas. They are less transparent than quotas because governments usually do not publish information on the total allowable quantity of imports and foreign firms are left in the dark about the specific limits to their exports.

A third form of quota, and the one that has been common in U.S. commercial policy, is the **voluntary export restraint (VER)**, also known as the *voluntary restraint agreement* (VRA). Under a VER, the exporting country "voluntarily" agrees to limit its exports for some period. The agreement usually occurs after a series of negotiations in which the exporter may be threatened with much more severe restrictions if they do not agree to limit exports in a specific market. Given that there is usually more than a hint of coercion, it may be a misnomer to call these restrictions "voluntary."

VERs were popular forms of protection in the 1970s and 1980s, but new limits on their use were implemented under the Uruguay Round agreement. In 2005, however, both the United States and the European Union (EU) negotiated export restraints in textiles and apparel with China.

The Effect on the Profits of Foreign Producers

The main difference between tariffs and quotas is that there is no government revenue from quotas. In place of tariff revenue, there are greater profits for foreign producers, called **quota rents**.

In Figure 6.6, the world price is set at P_w, domestic production is Q_1, and imports are Q_1Q_2. Suppose that the government decides to set a quota on imports of quantity Q_1Q_2*. At price P_w, demand exceeds supply, which is equal to Q_1 domestic plus Q_1Q_2* imports. Consequently, the price rises until supply equals demand when the gap between the domestic supply curve and the