

The Tariff Concept

A **tariff** is simply a tax (duty) levied on a product when it crosses national boundaries. The most widespread tariff is the *import tariff*, which is a tax levied on an imported product. A less common tariff is an *export tariff*, which is a tax imposed on an exported product. Export tariffs have often been used by developing nations. For example, cocoa exports have been taxed by Ghana, and oil exports have been taxed by the Organization of Petroleum Exporting Countries (OPEC) in order to raise revenue or promote scarcity in global markets and hence increase the world price.

Did you know that the United States cannot levy export tariffs? When the U.S. Constitution was written, southern cotton-producing states feared that northern textile-manufacturing states would pressure the federal government into levying export tariffs to depress the price of cotton. An export duty would lead to decreased exports and thus a fall in the price of cotton within the United States. As the result of negotiations, the Constitution was worded so as to prevent export taxes: "No tax or duty shall be laid on articles exported from any state."

Tariffs may be imposed for protection or revenue purposes. A **protective tariff** is designed to insulate import-competing producers from foreign competition. Although a protective tariff generally

is not intended to totally prohibit imports from entering the country, it does place foreign producers at a competitive disadvantage when selling in the domestic market. A **revenue tariff** is imposed for the purpose of generating tax revenues and may be placed on either exports or imports.

Over time, tariff revenues have decreased as a source of government revenue for industrial nations, including the United States. In 1900, tariff revenues constituted more than 41 percent of U.S. government receipts; in 2001, the figure stood at 1 percent. However, many developing nations currently rely on tariffs as a major source of government revenue. Table 4.1 shows the percentage of government revenue selected nations derive from tariffs.

Types of Tariffs

Tariffs can be specific, ad valorem, or compound. A **specific tariff** is expressed in terms of a fixed amount of money per physical unit of the imported product. For example, a U.S. importer of a German computer may be required to pay a duty to the U.S. government of \$100 per computer, regardless of the computer's price. An **ad valorem** (of value) **tariff**, much like a sales tax, is expressed as a fixed percentage of the value of the imported product. Suppose that an ad valorem duty of 1.5

percent is levied on imported trucks. A U.S. importer of a Japanese truck valued at \$20,000 would be required to pay a duty of \$3,000 to the government ($\$20,000 \times 15\% = \$3,000$). A **compound tariff** is a combination of specific and ad valorem tariffs. For example, a U.S. importer of a television might be required to pay a duty of \$20 plus 5 percent of the value of the television. Table 4.2 lists U.S. tariffs on certain items.

What are the relative merits of specific, ad valorem, and compound tariffs?

Specific Tariff

As a fixed monetary duty per unit of the imported product, a specific tariff is relatively easy to apply and administer, particularly to standardized commodities and staple products where the value of the dutiable goods cannot be easily observed. A main disadvantage of a specific tariff is that the degree of protection it affords domestic producers varies *inversely* with changes in import prices. For example, a specific tariff of \$1,000 on autos will discourage imports priced at \$20,000 per auto to a greater degree than those priced at \$25,000. During times of rising import prices, a given specific tariff loses some of its protective effect. The result is to encourage domestic firms to produce less expensive goods, for which the degree of pro-

tection against imports is higher. On the other hand, a specific tariff has the advantage of providing domestic producers more protection during a business recession, when cheaper products are purchased. Specific tariffs thus cushion domestic producers progressively against foreign competitors who cut their prices.

Ad Valorem Tariff

Ad valorem tariffs usually lend themselves more satisfactorily to manufactured goods, because they can be applied to products with a wide range of grade variations. As a percentage applied to a product's value, an ad valorem tariff can distinguish among small differentials in product quality to the extent that they are reflected in product price. Under a system of ad valorem tariffs, a person importing a \$20,000 Honda would have to pay a higher duty than a person importing a \$19,900 Toyota. Under a system of specific tariffs, the duty would be the same.

Another advantage of an ad valorem tariff is that it tends to maintain a constant degree of protection for domestic producers during periods of changing prices. If the tariff rate is 20 percent ad valorem and the imported product price is \$200, the duty is \$40. If the product's price increases, say, to \$300, the duty collected rises to \$60; if the

TABLE 4.1

Tariff Revenues as a Percentage of Government Revenues, 2001: Selected Countries

Developing Countries	Percentage	Industrial Countries	Percentage
Ghana	74.65	Australia	2.56
The Bahamas	55.94	New Zealand	1.73
Sudan	51.94	Canada	1.32
Madagascar	51.86	Iceland	1.24
Uganda	49.82	Japan	1.24
Sierra Leone	48.60	Switzerland	1.02
Dominican Republic	42.74	United States	1.01
Jordan	31.85	Norway	0.49

Source: International Monetary Fund, *Government Finance Statistics Yearbook* (Washington, DC, 2002), pp. 4–5.

TABLE 4.2

Selected U.S. Tariffs

Product	Duty Rate
Brooms	32 cents each
Fishing reels	24 cents each
Wrist watches (without jewels)	29 cents each
Ball bearings	2.4% ad valorem
Electrical motors	6.7% ad valorem
Bicycles	5.5% ad valorem
Wool blankets	1.8 cents/kg + 6% ad valorem
Electricity meters	16 cents each + 1.5% ad valorem
Auto transmission shafts	25 cents each + 3.9% ad valorem

Source: U.S. International Trade Commission, *Tariff Schedules of the United States* (Washington, DC: U.S. Government Printing Office, 2004); <http://www.usitc.gov/tariffs.htm>.

product price falls to \$100, the duty drops to \$20. An ad valorem tariff yields revenues proportionate to values, maintaining a constant degree of relative protection at all price levels. An ad valorem tariff is similar to a proportional tax in that the real proportional tax burden or protection does not change as the tax base changes. In recent decades, in response to global inflation and the rising importance of world trade in manufactured products, ad valorem duties have been used more often than specific duties.

Determination of duties under the ad valorem principle at first appears to be simple, but in practice it has suffered from administrative complexities. The main problem has been trying to determine the value of an imported product, a process referred to as **customs valuation**. Import prices are estimated by customs appraisers, who may disagree on product values. Moreover, import prices tend to fluctuate over time, which makes the valuation process rather difficult.

Another customs-valuation problem stems from variations in the methods used to determine a commodity's value. For example, the United States has traditionally used **free-on-board (FOB) valuation**, whereby the tariff is applied to a product's value as it leaves the exporting country. But European countries have traditionally used a **cost-insurance-freight (CIF) valuation**, whereby ad valorem tariffs are levied as a percentage of the imported commodity's total value as it arrives at its final destination. The CIF price thus includes transportation costs, such as insurance and freight.

Compound Tariff

Compound duties are often applied to manufactured products embodying raw materials that are subject to tariffs. In this case, the specific portion of the duty neutralizes the cost disadvantage of domestic manufactures that results from tariff protection granted to domestic suppliers of raw materials, and the ad valorem portion of the duty grants protection to the finished-goods industry. In the United States, for example, there is a compound duty on woven fabrics (48.5 cents per kilogram plus 38 percent). The specific portion of the duty (48.5 cents) compensates U.S. fabric manufacturers for tariff protection granted to U.S. cotton producers, while the ad

valorem portion of the duty (38 percent) provides protection for their own woven fabrics.

Smuggled Steel Evades U.S. Tariffs

Manuel Ibanez smuggled 20,000 tons of steel into the United States in 2000. It was easy. All he did was modify the shipping documents on a product called "reinforcing steel bar" to make it appear that it was part of a shipment of another type of steel called "flat-rolled." This deception saved him about \$38,000 in import duties. Multiply this tariff-evasion episode many times over and you have smuggled steel avoiding hundreds of thousands of dollars in duties in the past few years. The smuggling of steel concerns the U.S. government, which loses tariff revenue, and also the U.S. steel industry, which maintains that it cannot afford to compete with products made cheaper by tariff evasion.

Each year, about 38 million tons of steel with a value of about \$12 billion is imported by the United States. About half of it is subject to tariffs that range from pennies to hundreds of dollars a ton. The amount of the tariff depends on the type of steel product (of which there are about 1,000) and on the country of origin (of which there are about 100). These tariffs are applied to the selling price of the steel in the United States. U.S. Customs Service inspectors scrutinize the shipments that enter the United States to make sure that tariffs are properly assessed. However, monitoring shipments is difficult given the limited staff of the customs service. Therefore, the risk of being caught and the odds of penalties being levied are modest.

Although larger importers of steel generally pay correct duties, it is the smaller, often fly-by-night importers that are more likely to try to slip illegal steel into the country. These traders use one of three methods to evade tariffs. One method is to falsely reclassify steel that would be subject to a tariff as a duty-free product. Another is to detach markings that the steel came from a country subject to tariffs and make it appear to have come from one that is exempt. A third method involves altering the chemical composition of a steel product enough so that it can be labeled duty-free.

For example, one importer purchased 20,000 tons of low-grade wire rod from a mill in Ukraine. He stated that the product was subject to a 10 percent tariff, which in effect made it unprofitable to sell in the United States. The importer then researched the laws and noticed that eight categories of high-grade wire rod did not have a tariff. So, he altered the classification codes that U.S. Customs uses to identify steel products to say he had high-quality wire rod. The deception, he estimates, saved him from having to pay \$42,000 in tariffs, and he saw nothing wrong with that. He complained that U.S. trade laws are unfair and that the only way to make any money is by evading the laws. Although Customs agents did not know that Ukraine produces only low-quality wire rod, steel companies in the United States did. They contacted Customs agents, who tracked down the importer and fined him.

Although Customs inspectors attempt to scrutinize imports, once the steel gets by them they can do little about it. They cannot confiscate the smuggled steel because often it is already sold and in use. Meanwhile, the people buying the steel get a nice price break, and the American steel companies, who compete against smuggled steel, find their sales and profits declining.²

Effective Rate of Protection

A main objective of an import tariff is to protect domestic producers from foreign competition. By increasing the domestic price of an import, a tariff serves to make home-produced goods more attractive to resident consumers. Output in the import-competing industry can thus expand beyond what would exist in the absence of a tariff. The degree of protection afforded by a tariff reflects the extent to which domestic prices can rise above foreign prices before the home producers are priced out of the market.

The **nominal tariff rate** published in a country's tariff schedule gives us a general idea of the level of protection afforded the home industry. But it may

²Drawn from "Steel Smugglers Pull Wool over the Eyes of Customs Agents to Enter U.S. Market," *The Wall Street Journal*, November 1, 2001, pp. A1 and A14.

not always truly indicate the actual, or effective, protection given. For example, it is not necessarily true that a 25 percent import tariff on an automobile provides the domestic auto industry a protective margin of 25 percent against foreign producers. This is because the nominal tariff rates apply only to the total value of the final import product. But in the production process, the home import-competing industry may use imported material inputs or intermediate products that are subject to a different tariff than that on the final product; in this case, the **effective tariff rate** will differ from the nominal tariff rate.³

The effective tariff rate is an indicator of the actual level of protection that a nominal tariff rate provides the domestic import-competing producers. It signifies *the total increase in domestic productive activities (value added) that an existing tariff structure makes possible*, compared with what would occur under free-trade conditions. The effective rate tells us how much more expensive domestic production can be relative to foreign production and still compete in the market.

Assume that the domestic radio industry adds value to imported inputs by assembling component radio parts imported from abroad. Suppose the imported components can enter the home country on a duty-free basis. Suppose also that 20 percent of a radio's final value can be attributed to domestic assembly activities (value added), the remaining 80 percent reflecting the value of the imported components. Furthermore, let the cost of the radio components be the same for both the domestic country and the foreign country. Finally, assume that the foreign country can produce a radio for \$100.

Suppose the home country imposes a nominal tariff of 10 percent on finished radios, so that the domestic import price rises from \$100 to \$110 per unit (see Table 4.3 on page 106). Does this mean that home producers are afforded an effective rate of protection equal to 10 percent? Certainly not! The imported component parts enter the country duty-free (at a nominal tariff rate less than that on

³The effective tariff is a measure that applies to a single nation. In a world of floating exchange rates, if all nominal or effective tariff rates rose, the effect would be offset by a change in the exchange rate.