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«ЗАПОРІЗЬКИЙ НАЦІОНАЛЬНИЙ УНІВЕРСИТЕТ»  
МІНІСТЕРСТВА ОСВІТИ І НАУКИ УКРАЇНИ

# Nontariff Trade Barriers

## Part 3

## 1. Domestic content requirements

Today, many products, such as autos and aircraft, embody worldwide production. Domestic manufacturers of these products purchase resources or perform assembly functions outside the home country, a practice known as outsourcing or production sharing. For example, General Motors has obtained engines from its subsidiaries in Mexico, Chrysler has purchased ball joints from Japanese producers, and Ford has acquired cylinder heads from European companies. Firms have used outsourcing to take advantage of lower production costs overseas, including lower wage rates.

Domestic workers often challenge this practice, maintaining that outsourcing means that cheap foreign labor takes away their jobs and imposes downward pressure on the wages of those workers who are able to keep their jobs.

To limit the practice of outsourcing, organized labor has lobbied for the use of domestic content requirements. These requirements stipulate the minimum percentage of a product's total value that must be produced domestically if the product is to qualify for zero tariff rates. The effect of content requirements is to pressure both domestic and foreign firms who sell products in the home country to use domestic inputs (workers) in the production of those products. The demand for domestic inputs thus increases, contributing to higher input prices.

Manufacturers generally lobby against domestic content requirements, because they prevent manufacturers from obtaining inputs at the lowest cost, thus contributing to higher product prices and loss of competitiveness.

Worldwide, local content requirements have received most attention in the automobile industry. Developing countries have often used content requirements to

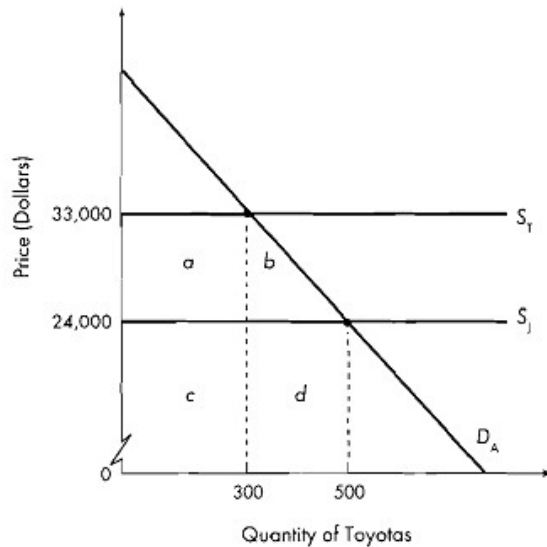
foster domestic automobile production, as shown in Table 1.

**Domestic Content Requirements Applied to Automobiles in Selected Countries**

<u>Country</u>	<u>Minimum Domestic Content Required (Percent) to Qualify for Zero Duty Rates</u>
Argentina	76%
Mexico	62
Brazil	60
Uruguay	60
Vietnam	60
Chinese Taipei	40
Venezuela	30
Colombia	30

Figure 1 illustrates possible welfare effects of an Australian content requirement on automobiles.

### Welfare Effects of a Domestic Content Requirement



A domestic content requirement leads to rising production costs and prices to the extent that manufacturers are "forced" to locate production facilities in a high-cost nation. Although the content requirement helps preserve domestic jobs, it imposes welfare losses on domestic consumers.

Assume that  $D_A$  denotes the Australian demand schedule for Toyota automobiles while  $S_J$  depicts the supply price of Toyotas exported to Australia, \$24,000. With free trade, Australia imports 500 Toyotas. Japanese resource owners involved in manufacturing this vehicle realize incomes totaling \$12 million, denoted by area  $c + d$ . Suppose the Australian government imposes a domestic content requirement on autos. This policy causes Toyota to establish a factory in Australia to produce vehicles replacing the Toyotas previously imported by

Australia. Assume that the transplant factory combines Japanese management with Australian resources (labor and materials) in vehicle production. Also assume that high Australian resource prices (wages) cause the transplant's supply price to be \$33,000, denoted by  $S_t'$ . Under the content requirement, Australian consumers demand 300 vehicles. Because production has shifted from Japan to Australia, Japanese resource owners lose \$12 million of income. Australian resource owners gain \$9.9 million of income (area  $a + c$ ) minus the income paid to Japanese managers and the return to Toyota's capital investment (factory) in Australia.

However, the income gains of Australian resource owners inflict costs on Australian consumers. Because the content requirement causes the price of Toyotas to increase by \$9,000, Australian consumer surplus decreases by area  $a + b$  (\$3,600,000). Of this amount, area  $b$  (\$900,000) is a deadweight welfare loss for

Australia. Area a (\$2,700,000) is the consumer cost of employing higher-priced Australian resources instead of lower-priced Japanese resources; this amount represents a redistribution of welfare from Australian consumers to Australian resource owners. Similar to other import restrictions, content requirements lead to the subsidizing by domestic consumers of the domestic producer.

## 2. Dumping

The case for protecting import-competing producers from foreign competition is bolstered by the antidumping argument. Dumping is recognized as a form of international price discrimination. It occurs when foreign buyers are charged lower prices than domestic buyers for an identical product, after allowing for transportation costs and tariff duties. Selling in foreign markets at a price below the cost of production is also considered dumping.

### Forms of Dumping

Commercial dumping is generally viewed as sporadic, predatory, or persistent in nature. Each type is practiced under different circumstances.

Sporadic dumping (distress dumping) occurs when a firm disposes of excess inventories on foreign markets by selling abroad at lower prices than at home. This form of dumping may be the result of misfortune or poor planning by foreign producers. Unforeseen



changes in supply and demand conditions can result in excess inventories and thus in dumping. Although sporadic dumping may be beneficial to importing consumers, it can be quite disruptive to import-competing producers, who face falling sales and short-run losses. Temporary tariff duties can be levied to protect home producers, but because sporadic dumping has minor effects on international trade, governments are reluctant to grant tariff protection under these circumstances.

Predatory dumping occurs when a producer temporarily reduces the prices charged abroad to drive foreign competitors out of business. When the producer succeeds in acquiring a monopoly position, prices are then raised commensurate with its market power. The new price level must be sufficiently high to offset any losses that occurred during the period of cutthroat pricing. The firm would presumably be confident in its ability to prevent the entry of potential

competitors long enough for it to enjoy economic profits. To be successful, predatory dumping would have to be practiced on a massive basis to provide consumers with sufficient opportunity for bargain shopping. Home governments are generally concerned about predatory pricing for monopolizing purposes and may retaliate with antidumping duties that eliminate the price differential. Although predatory dumping is a theoretical possibility, economists have not found empirical evidence that supports its existence.

Persistent dumping, as its name suggests, goes on indefinitely. In an effort to maximize economic profits, a producer may consistently sell abroad at lower prices than at home.

### 3. Voluntary Export Restraint

When a government sets a quantity restriction, the government must implement procedures to prevent exports beyond the restricted level. A binding voluntary export restraint (VER) will result in a higher price in the import country and in the case of a large country, a reduction in the price in the exporter's market. The price wedge would generate profit opportunities for anyone who could purchase (or produce) the product at the lower price (or cost) in the export market and resell it at the higher price in the import market.

Three basic methods are used to administer VERs.

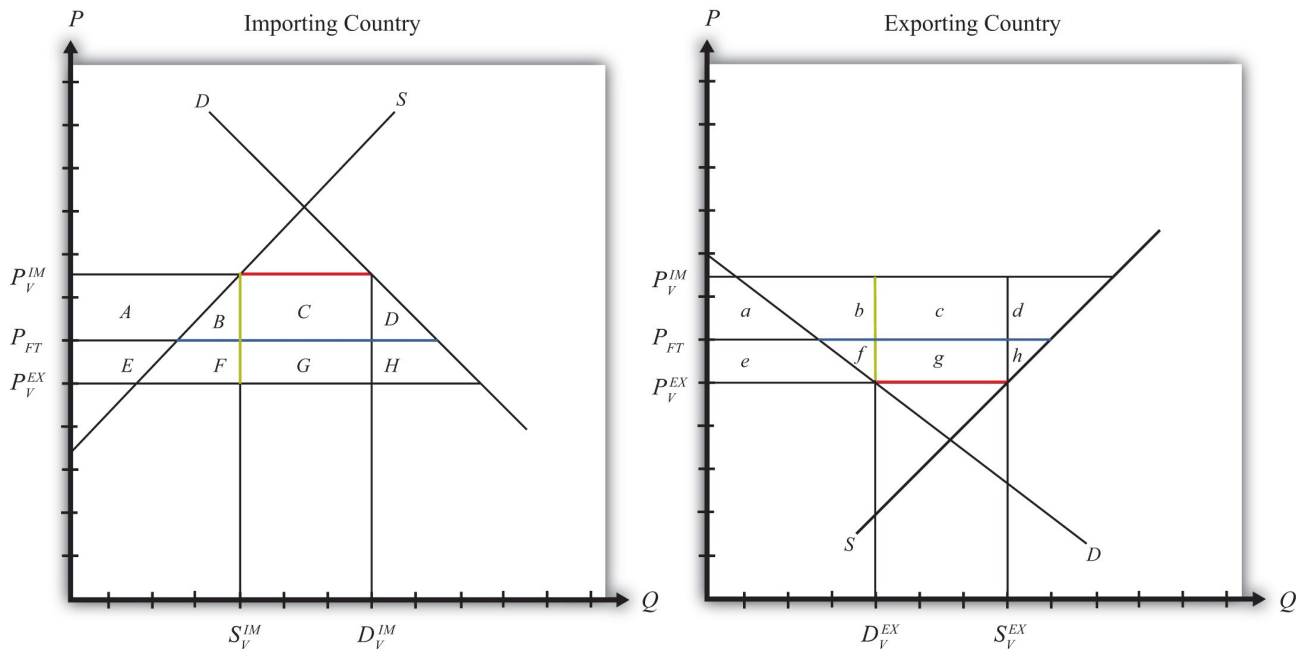
*1. Offer export rights on a first-come, first-served basis.* The government could allow exports to exit freely from the start of the year until the VER limit is reached. Once filled, customs officials would prohibit export of the product for the remainder of the year. If administered in this way, the VER may result in a

fluctuating price for the product over the year. During the open period, a sufficient amount of imports may flow in to achieve free trade prices. Once the window is closed, prices would revert to the autarky prices.

*2. Auction export rights.* Essentially the government could sell quota tickets where each ticket presented to a customs official would allow the exit of one unit of the good. If the tickets are auctioned, or if the price is determined competitively, the price at which each ticket would be sold is the difference in prices that exist between the export and import market. The holder of a quota ticket can buy the product at the low price in the exporter's market and resell it at the higher price in the importer's market. If there are no transportation costs, a quota holder can make a pure profit, called a quota rent, equal to the difference in prices. If the government sells the quota tickets at the maximum attainable price, then the government would receive all the quota rents.

3. *Give away export rights.* The government could give away the export rights by allocating quota tickets to appropriate individuals. The recipient of a quota ticket essentially receives a windfall profit since, in the absence of transportation costs, they can claim the entire quota rent at no cost to themselves. Many times governments allocate the quota tickets to domestic exporting companies based on past market shares. Thus, if an exporter had exported 40 percent of all exports before the VER, then it would be given 40 percent of the quota tickets. It is worth noting that because quota rents are so valuable, a government can use them to direct rents toward its political supporters. Suppose for simplicity that there are only two trading countries: one importing country and one exporting country. The supply and demand curves for the two countries are shown in Figure 2 "Welfare Effects of a VER: Large Country Case".  $P_{FT}$  is the free trade equilibrium price. At that price, the excess demand by

the importing country equals excess supply by the exporter.



The quantity of imports and exports is shown as the blue line segment on each country's graph (the horizontal distance between the supply and demand curves at the free trade price). Suppose the large exporting country implements a binding voluntary export restraint set equal to the length of the red line segment. When a new equilibrium is reached, the price in the importing country will rise to the level at which import demand is equal to the quota level. The

price in the exporting country will fall until export supply is equal to the quota level.

*VER effects on the exporting country's consumers.*

Consumers of the product in the exporting country experience an increase in well-being as a result of the VER. The decrease in their domestic price raises the amount of consumer surplus in the market.

*VER effects on the exporting country's producers.*

Producers in the exporting country experience a decrease in well-being as a result of the quota. The decrease in the price of their product in their own market decreases producer surplus in the industry. The price decline also induces a decrease in output, a decrease in employment, and a decrease in profit, payments, or both to fixed costs.

*VER effects on the quota rents.* Who receives the quota rents depends on how the government administers the quota.

1. If the government auctions the quota rights for their full price, then the government receives the quota rents. In this case, the quota is equivalent to a specific export tax set equal to the difference in prices ( $T = P_V^{IM} - P_V^{EX}$ ), shown as the length of the green line segment in [Figure 2 "Welfare Effects of a VER: Large Country Case"](#).
2. If the government gives away the quota rights, then the quota rents accrue to whoever receives these rights. Typically, they would be given to the exporting producers, which would serve to offset the producer surplus losses. It is conceivable that the quota rents may exceed the surplus loss so that the export industry is better off with the VER than without. Regardless, the benefits would remain in the domestic economy.

*VER effects on the exporting country.* The aggregate welfare effect for the country is found by summing the gains and losses to consumers, producers, and the



recipients of the quota rents. The net effect consists of three components: a positive terms of trade effect ( $c$ ), a negative production distortion ( $h$ ), and a negative consumption distortion ( $f$ ).

Because there are both positive and negative elements, the net national welfare effect can be either positive or negative. The interesting result, however, is that it can be *positive*. This means that a VER implemented by a large exporting country *may* raise national welfare.

Generally speaking, the following are true:

1. Whenever a large country implements a small restriction on exports, it will raise national welfare.
2. If the VER is too restrictive, national welfare will fall.
3. There will be a positive quota level that will maximize national welfare.

However, it is also important to note that not everyone's welfare rises when there is an increase in national welfare. Instead, there is a redistribution of income. Consumers of the product and recipients of the quota rents will benefit, but producers may lose. A national welfare increase, then, means that the sum of the gains exceeds the sum of the losses across all individuals in the economy. Economists generally argue that, in this case, compensation from winners to losers can potentially alleviate the redistribution problem.

*VER effects on the importing country's consumers.*

Consumers of the product in the importing country suffer a reduction in well-being as a result of the VER. The increase in the domestic price of both imported goods and the domestic substitutes reduces the amount of consumer surplus in the market.

*VER effects on the importing country's producers.*

Producers in the importing country experience an

increase in well-being as a result of the VER. The increase in the price of their product increases producer surplus in the industry. The price increases also induce an increase in the output of existing firms (and perhaps the addition of new firms), an increase in employment, and an increase in profit, payments, or both to fixed costs.

*VER effects on the importing country.* The aggregate welfare effect for the country is found by summing the gains and losses to consumers and producers. The net effect consists of three components: a negative terms of trade effect ( $C$ ), a negative consumption distortion ( $D$ ), and a negative production distortion ( $B$ ).

Since all three components are negative, the VER must result in a reduction in national welfare for the importing country. However, it is important to note that a redistribution of income occurs—that is, some groups gain while others lose. This is especially

important because VERs are often suggested by the importing country. This occurs because the importing country's government is pressured by the import-competing producers to provide protection in the form of an import tariff or quota. Government reluctance to use these policies often leads the importer to negotiate VERs with the exporting country. Although the importing country's national welfare is reduced, the import-competing producers gain nonetheless.

*VER effects on world welfare.* The effect on world welfare is found by summing the national welfare effects on the importing and exporting countries. By noting that the terms of trade gain to the importer is equal to the terms of trade loss to the exporter, the world welfare effect reduces to four components: the importer's negative production distortion ( $B$ ), the importer's negative consumption distortion ( $D$ ), the exporter's negative consumption distortion ( $f$ ), and the exporter's negative production distortion ( $h$ ). Since

each of these is negative, the world welfare effect of the VER is negative. The sum of the losses in the world exceeds the sum of the gains. In other words, we can say that a VER results in a reduction in world production and consumption efficiency.