ECONOMIC ASSESSMENT OF AUCTIONING EXISTING IMPORT QUOTAS

Staff Memorandum
April 1989

The Congress of the United States
Congressional Budget Office

This memorandum, prepared at the request of the Senate Budget Committee, provides background information on the potential budgetary consequences of auctioning U.S. import quotas and explains budget estimates previously provided to the Committee. The analysis was done by Elliot Schwartz of CBO's Natural Resources and Commerce Division, with the assistance of Daniel Kaplan and David Trechter. Stephen Parker contributed to the initial content and structure of the analysis, and Kathleen O'Connell provided many valuable comments. Questions concerning the analysis should be directed to Elliot Schwartz at 226-2940.

INTRODUCTION

The U.S. government employs several different types of trade policies to limit the imports of various products. The most important of these current policies include voluntary export restraints (VERs) for textiles, apparel, steel, and machine tools; and import quotas for sugar, cheese, and several other agricultural products. Most of these policies, especially the VERs, are applied through a series of bilateral agreements with supplying countries. As a result, the quotas are more stringent for some countries than others, and some major supplying countries of certain products are not restricted by quotas at all.

Although each of these policies is administered differently, the final economic outcomes are similar. Limiting the quantity of imports into the economy creates an artificial scarcity that forces domestic consumers to offer higher prices as they bid among themselves to buy the now scarce imports. Under competitive market conditions, and if the U.S. government allows foreign governments to allocate the quota among their producers, the portion of the higher price resulting from the imposed scarcity--called a quota rent--goes to the foreign governments and producers. But if the U.S. government auctions rights to import within the quota, then the rents can be kept in the United States as government revenue. In fact, auctioning quota rights, under most conditions, would generate the same amount of money as an equivalent tariff.

The Congressional Budget Office (CBO) has estimated the potential revenue effects of auctioning U.S. import quotas to the highest bidder. Since the U.S. government can sell only the quota rights that it controls, the analysis includes only formally negotiated and currently implemented import quotas as potential revenue sources. Thus, limitations imposed by the Japanese on automobile exports, which have not been formally agreed to by the U.S. government, are excluded.

CBO's analysis shows that a maximum of about $2.6 billion in auction fees could be raised in 1990 if existing import quotas, including voluntary export restraints, were auctioned. Assuming that expiring import quotas are extended, a total of $21.7 billion could be collected over the five-year period ending in 1994. Unlike the CBO baseline, these economic estimates assume the renewal of expiring laws and policies. If current import quota agreements were allowed to expire, estimated auction fees would fall to $0.4 billion by 1992. These auction fees would typically be classified as indirect business taxes in the National Income and Product Accounts. According to standard estimating conventions that assume nominal gross national product (GNP) remains unchanged, the auction fees would be subject to an offset reflecting lower income and payroll taxes.

These economic estimates assume no retaliation by foreign governments and perfect competition in all markets. Foreign governments are presumed to continue to limit their exports to the current VER levels even if the United States changes the terms of the original agreements by auctioning the quota rights instead of granting them freely to the foreign governments, as is now the case. These assumptions imply that the total rents from all existing import quotas, whether currently flowing to foreign suppliers or domestic importers, could be collected by the U.S. government through an auction of import licenses. If either of these simplifying assumptions is

not satisfied, the net revenue collected could be much less. This memorandum explains how these economic estimates are derived, but makes no attempt to examine the overall merits of auctioning import quotas.[1]

METHODOLOGY

The estimates of potential revenue gains assume that foreign governments do not alter their behavior in response to the change in the system of allocating quota rights. Foreign governments often are willing to enter into VER agreements with the United States because VERs allow them to allocate to their own producers the higher profits on imports created by the quota. Reallocating these rents to the U.S. government --by auctioning the quota rights--causes foreign suppliers to lose these profits. Foreign governments, therefore, may respond to this change in the basic terms of the original agreements by abrogating the agreement and increasing their export levels. If no export limits are applied, then there are no quota rights to be auctioned. Under this scenario, protection could only be provided by an import quota enforced unilaterally by the United States. Unilateral import quotas, however, could induce foreign retaliation and could hurt the U.S. economy.

The quota rents, which represent the maximum revenue that can be collected by auctioning import licenses, technically equal the quantity of the imports allowed under the quota times the average quota rent per import unit.[2] In value terms, the

---

1. Supporters of auctioning quotas maintain that although administrative problems might arise with the implementation of a system of quota auctions, these problems are manageable and would not pose a significant obstacle to its implementation. See C. Fred Bergsten, Jeffrey Schott, Wendy E. Takacs, and Kimberly A. Elliott, Auction Quotas and United States Trade Policy (Washington, D.C.: Institute for International Economics, 1987). For an alternative view, see Laura Megna Boughman, "Auctioning of Quotas: Lots of Pain for Little Gain," in The World Economy, vol. 11, no. 2. Boughman argues that auctioning import licenses is neither likely to enhance competitiveness nor raise much revenue, and that it could prove costly to the overall economy.

2. Contrary to current practices, auctioned import licenses would need to be applied to all potential importers of a product, not just those that have signed voluntary agreements. Because of data limitations, these estimates assume that import quota rents per unit are about the same for all supplying countries affected by the quota. This approach implies that the potential revenue from auctioning bilateral quotas is about the same as the revenue from auctioning global quotas. Since a global quota produces more quota rents than does a series of bilateral quotas with the same limitation on import quantity--that is, low-cost suppliers expand their imports at the expense of higher-cost producers under a global quota--and since most import quotas are currently enforced bilaterally, this assumption may bias the estimates upward. On the other hand, emerging suppliers may be excluded from current voluntary agreements that divide the market among traditional suppliers. In this situation, quota auctions may yield higher rents because low-cost producers have the economic potential to outbid current suppliers.

rent equals the quota-constrained value of imports times the ad valorem equivalent of the quota rent. The quota rent per unit is the difference between the price of an imported product with and without the quota. Prices to consumers are assumed to be unaffected whether the quota is auctioned or not. The quota rent per unit can be estimated directly if the price of the import sold in the U.S. market can be compared with the price of a similar good sold in an unrestricted market--say, a third country or a world market.[3] Where direct price comparisons are not available, economic models must be used to estimate the quota rents. In addition, since these estimates are for future years, the CBO macroeconomic forecast is used to project future economic conditions, such as the growth rate of the gross national product, the price deflator, and the foreign exchange rate. Finally, the assumption of perfect competition in all markets assures that foreign suppliers could not change profit levels and that bidders in the auction could not collude to extract any part of the quota rents.

REVENUE ESTIMATES BY SECTOR

Table 1 presents estimates of the quota rents resulting from each major U.S. import quota (including negotiated voluntary export rights) in force. These rents represent the maximum revenue that the U.S. government could raise by auctioning quota rights to the highest bidder. Auctions are assumed to take place at the beginning of each year, such that all fees for calendar year quotas are collected within the concurrent fiscal year.

Agriculture

For agricultural products, the calculation of quota rents is relatively straightforward. The U.S. Department of Agriculture (USDA) sets, usually one year in advance, the import quota level needed to maintain the announced domestic support price.[4] The USDA also monitors and forecasts comparable world prices. In estimating quota rents for agricultural products, then, the main uncertainties are future changes in world market prices, domestic price supports, and import quotas.

Sugar. The U.S. sugar quota was increased in 1989 for the first time in several years. This increase reflects a decline in U.S. supplies caused mainly by the 1988 drought and an increase in domestic demand for sugar. While the supply disruption is likely to be transitory, many observers feel that the increased demand, which stems from a leveling-off of demand for sugar substitutes such as high-fructose corn syrup, will

3. Any price comparisons must account for differences in product quality, tariffs, and shipping costs. Also, quota rents do not include tariff revenues collected.

4. Continuing authority for the USDA to set import quotas is contained under Section 22 of the Agricultural Adjustment Act and other authorities, including the Meat Import Act.

TABLE 1. ESTIMATED QUOTA RENT BY SECTOR AND PRODUCT
(By fiscal year, in millions of dollars)

	1990	1991	1992	1993	1994	Five-Year Total
Agriculture Sector						
Sugar	321	304	303	309	305	1,542
Dairy	70	70	70	70	70	350
Peanuts	a	a	a	a	a	1
Meat	53	53	53	53	53	265
Subtotal	444	427	426	432	428	2,158
Manufacturing Sector						
Steel	0	180	733	557	832	2,302
Textiles	84	128	183	196	210	801
Apparel	2,036	2,733	3,579	3,869	4,183	16,400
Machine Tool	13	13	13	13	13	65
Subtotal	2,132	3,054	4,508	4,635	5,238	19,568
Total Rent						
Gross	2,577	3,481	4,934	5,067	5,666	21,726
Net of Income and Payroll Tax Offsets	1,933	2,611	3,700	3,801	4,250	16,294

SOURCE: Congressional Budget Office.

a. Less than $0.5 million.

remain an important factor in the domestic sugar market. This analysis assumes that the sugar quota will remain at the current level of 1,200 short tons per year for the next five years.

The sugar quota is designed to provide the United States with sufficient sugar to balance supply and demand for sugar at the support price of 21.8 cents per pound. It is assumed that the support price will remain at this level for the next five years.

The world price of sugar has been quite volatile in recent years, largely because major markets (the United States and the European Community) are quite insulated from the world market. As a result, a much smaller market must absorb changes in the supply of sugar. The world price has strengthened recently, increasing from 6 cents per pound two years ago to more than 10 cents per pound currently. The future world price is assumed to be a moving average of the preceding three years.

Based on the assumptions discussed in the section on methodology, auctioning sugar quotas of 1,200 short tons would generate approximately $300 million per year.

Dairy. The United States maintains quotas on most manufactured dairy products (casein, non-cow's-milk cheeses, and soft-ripened cheeses being some of the major exceptions). The quotas are most binding on nonfat dry milk, butter, and some types of cheeses. Cheeses represent the largest volume of import quotas, with approximately 85 percent of all imported cheese subject to quota restrictions.

The value of the dairy quota is calculated on the basis of the price for cheddar cheese. Several qualifications, however, should be appended to this estimate. Although CBO's analysis assumed that perfect competition characterizes the markets for these quotas, many of the cheeses that face import restrictions are produced in markets that significantly violate the perfect competition assumptions. For example, according to USDA analysts, virtually all of the swiss-type cheese imported from Finland under quota comes from one cooperative, and Finland has recently accounted for between one-quarter and one-third of all imported swiss cheese. Second, given the heterogeneity of products covered by the dairy quotas, use of a single representative commodity, though necessary because of data constraints, could significantly misstate the value of the quotas. Finally, because the dairy sector is highly protected in most countries, it is difficult to determine a world price for dairy products.

Given these qualifications, the domestic price for cheese is assumed to remain at approximately $1.23 per pound for the next five years, and the world price to remain at 93 cents per pound. The cheese import quota is 240 million pounds per year, so the quota rent is about $70 million per year.

Peanuts. The United States has two levels of price supports for peanuts. The highest level, currently set at 30.79 cents per pound, applies to all peanuts grown in compliance with the national poundage quota (set at 1,440,000 short tons). For peanuts grown in excess of the poundage quota, growers can either sell at the world price (currently about 15 cents per pound) or the support price (7.5 cents per pound). To support a domestic price for peanuts that is roughly twice that of the world price,

imports are limited to only 1,000 short tons per year. In addition, there is a tariff of 3 percent on imported peanuts. As a result, auctioning peanut quotas could not be expected to generate more than $0.3 million per year.

Meat. The Meat Import Act of 1979 defines the rules under which certain meat imports, mainly beef, enter the United States. The act sets the formula by which the adjusted base quantity of imports is determined and states that if imports exceed a trigger level (equal to 110 percent of the adjusted base amount), then the President must impose import controls.

In fiscal year 1989, slightly less than 700,000 short tons of meat will be imported into the United States at a price of approximately $2,000 per ton. The domestic price of imported beef is about $80 per ton higher than the world prices of meat of similar quality. Thus, the maximum amount that might be raised by auctioning these import restrictions would be roughly $50 million per year.

Manufacture

Quota rents are much more difficult to estimate for the textile, apparel, steel and machine tool quotas.[5] It is extremely hard to disentangle the effects of an import quota from the many other factors influencing these sectors over time. The CBO steel model is used to estimate the quota rents from the steel VER, which is set to expire in late 1989. For the purposes of this exercise, the steel VER is assumed to be extended and set at a 20.2 percent import share of the domestic market, which is the current policy goal. For textiles and apparel, there is little agreement over the average quota rent resulting from the import limitations of the Multi-Fiber Agreement (MFA). As a result, the average rent is set by averaging several estimates.

Steel. Steel is protected by a negotiated VER agreement with a number of countries, most notably the European Community (EC), Japan, Korea, Brazil, and Mexico. The Presidential directive and subsequent Congressional resolution that established this program were expected to hold targeted imports to about 18.5 percent of the total U.S. market, and all steel imports to 20.2 percent. Japan and the EC account for about two-thirds of restricted imports. Canada, Taiwan, and several other countries are not covered by VERs. When the agreements began in 1985, these non-VER countries made up about 4.5 percent of the market, and they agreed informally not to take advantage of the VER to gain market share. For the period from 1983 through 1987, however, imports of heavy structural shapes from non-VER countries

5. One estimating uncertainty is whether current import barriers on manufactured products, which are implemented through bilateral VERs, will be extended in their current form. The agreements on steel expire in late 1989. The machine tool agreements expire after 1992. The Multi-Fiber Agreement on Textiles and apparel expires in 1991. The analysis assumes that these restraints remain in force.

increased 90 percent, while imports from VER countries were held to a 9 percent increase.[6]

The agreements expire this year. Coincidentally, the import share of domestic consumption of steel has fallen to the VER target levels, and many industry analysts believe that the VERs are not now prohibiting steel from entering the United States. Japan, Korea, and the EC are not expected to fill their quotas for this year.[7]

In part, the VERs appear to have been overtaken by two important economic events. The first and most dramatic has been the significant decline in the value of the dollar against the currency of the main steel exporters--Japan, the EC, and other European countries. In most analyses and model simulations of the domestic steel industry, exchange rates play a significant role in determining import and export shares. At current exchange rates, U.S.-produced steel is highly competitive with foreign steel, both domestically and in overseas markets. The CBO macroeconomic projections show a continuing fall in the exchange value of the dollar.

A second important trend is the increased productivity of the domestic steel industry. Over the past several years, the entire steel industry has been relatively successful in reducing costs, improving quality, and rationalizing production facilities. The industry has been helped by an increased demand for steel and steel-intensive products (automobiles, for example) and by higher capacity utilization rates, as some capacity has been retired.

These factors strongly support the consensus view that the VERs are not currently binding in the market and that, as a result, there may be no economic rents tied to these agreements at present--that is, there is no imposed scarcity. Future market conditions, however, may be different. If the Congress extended the VER program, and if other assumed conditions would hold (notably, nonretaliation and perfect competition), auctioning of quota licenses could be used to capture potential economic rents in future years.[8] These rents are derived using the CBO steel model to estimate import shares with and without the import quota. Estimates of quota

---

6. United States International Trade Commission, Monthly Report of the Status of the Steel Industry (December 1988), p. i.

7. See Congressional Research Service, Steel Imports: Are the VER Countries Filling Their Quotas? (February 3, 1989).

8. The possibility of capturing rents in this program is made more difficult by the specific elements of the negotiated bilateral agreements. Getting countries to agree to a restricted level of imports would presumably be more difficult because those countries would no longer be receiving economic rents. Moreover, many of the agreements now include some form of flexibility for the exporting country, so that over- and under-filled quotas can be moved forward and backward among relevant years and specific product categories, which are included in the agreements. The inclusion of product-specific limitations within the overall bilateral agreements may make administration of the auctions more costly, and the utility of specific licenses less valuable, unless secondary markets are developed.

rents for a VER set at 20.2 percent of domestic consumption yield no revenues in 1990, but produce a total of $2.3 billion over the 1990-1994 period, as the quotas become increasingly effective.

Textiles and Apparel. Most textile and apparel imports are limited by the Multi-Fiber Agreement, which is a series of bilateral VERs that primarily cover imports from developing countries and Japan. Imports from other countries, most notably Canada and the EC, are not covered. The MFA does not limit imports directly; rather, it establishes the procedures by which an exporting and an importing country can agree to limit the trade of particular products.

While the MFA has been quite effective in limiting imports of particular products from particular countries, it is less effective in controlling total textile and apparel imports. Under the MFA, most quotas initially grew by at least 6 percent a year--more rapidly than domestic consumption could be expected to grow. In addition, most countries had the flexibility to shift their productive resources to products--including materials not covered by the MFA--for which quotas had not been established. Finally, countries not covered by the MFA began exporting products to the United States.

In 1986, the MFA was renewed for the third time and a number of its provisions were significantly tightened, thus providing greater protection for the domestic industry. Most notably, products of silk, linen, and jute became subject to the MFA. In addition, for the first time, the MFA established overall export limits for a number of major producing countries.

Although the tightening of the MFA increased the quota rents, a number of factors were pulling in the opposite direction. Since the renewal of the MFA in 1986, the dollar has lost value on international markets. This has made imported textiles and apparel more expensive, thereby reducing U.S. demand for them. In addition, growth in apparel consumption--and especially women's apparel--has been quite sluggish. Finally, the U.S. industry has taken a number of steps to improve its competitiveness against foreign producers.

In 1988, imports of both textiles and apparel declined significantly. CBO's estimates of the quota rents associated with the MFA assume that moderate growth resumes beginning in 1989--2.5 percent per year for apparel and 1.5 percent per year for textiles. CBO assumes that as growth resumes, more of the quotas will become binding and the quota rents will increase. Finally, CBO assumes that the price of apparel increases by the CBO baseline estimate of the GNP deflator and by one-half the estimate of the change in the Federal Reserve Board's index of the weighted-average exchange value of the U.S. dollar. Accordingly, CBO estimates quota rents to be $2.0 billion in 1990 and $16.4 billion through 1994.

Machine Tools. The United States negotiated a VER agreement for various types of machine tools with Japan and Taiwan. The agreement started in 1987 and is scheduled to last five years. West Germany and Switzerland, however, refused to negotiate a VER, and were notified by the U.S. government that they could not increase their exports of certain machine tool products to the United States during this period. But even if the United States unilaterally imposed a quota on machine

tool imports from these two countries, the estimates presented here would not change substantially.

The VERs are designed to limit the import of some machine tools to about their 1981 market shares. Since the agreements were put into effect, overall machine tool imports have been down by about $200 million annually. Imports from the countries constrained by quotas (Japan and Taiwan) are about $100 million lower, which is in line with their 50 percent share of U.S. imports of machine tools. As with other imported products, as much as half of the decrease in imports of machine tools may be ascribed to the lower exchange value of the dollar. Thus, an estimated $50 million in imported machine tools may be constrained by the quota.[9] Assuming an average quota rent of about 25 percent, and that current market conditions stay about the same over the next several years, the potential gain from licensing could total $12.5 million annually.

9. Some evidence suggests that this amount may now be even lower. Some importers bound by quotas are believed to be shipping up to their quotas and placing the goods in warehouses, because of insufficient demand. Thus, the quota may be artificially driving up imports that would not be transported in the absence of the quota restrictions.