

EDUCATIONAL NOTE

The Economics and Politics of Import Quotas: A Teaching Note

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Abstract

The economic analysis of import quotas is straightforward enough, and yet challenging for many students. Why would a country enact an import quota when a tariff that is as effective in restricting imports generates revenue to the government that captures much of what would be deadweight loss with an import quota? Unfortunately, the standard model of quotas, while correct, is a bit confusing. This teaching note presents an alternate model for import quotas.

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I. Introduction

Part of the challenge of teaching trade is the ambivalence of Americans regarding trade as revealed by surveys of public opinion. Americans are not much in favor of trade. Indeed, at certain times recently (1990–92 and 2007–10) Americans were, on net, opposed to trade. Table 1 tracks American public opinion using various polls.

Table 1. Surveys of American Public Opinion regarding Trade, 1947–2022

	Number of Surveys		Net Percent Positive	
	Trade (in general)	Jobs	Trade (in general)	Jobs
ave. 1947-2022	267	64	6	-27
2018-2022	21	4	40	21
2011-2017	39	9	6	-31
2007-2010	69	10	-12	-34
2000-2006	66	19	14	-20
1996-1999	36	12	13	-19
1993-1995	30	7	9	-31
1990-1992	8	3	-7	-29
1947-1989	5	11	20	-47

An example of a survey question indicating an overall assessment of trade, from the NBC News/*Wall Street Journal* poll, is “In general, do you think that free trade between the United States and foreign countries has helped the United States, has hurt the United States, or has not made much of a difference either way?” An example of a survey question indicating an assessment of the impact of trade on jobs is “Do you believe that free trade between the U.S. and other countries creates more jobs in the U.S., loses more jobs in the U.S., or do you think it makes no difference one way or the other?”

The columns of table 1 show the number of surveys during each subperiod, and the net percentage of respondents having a net positive opinion of trade overall, and having a net positive opinion regarding the impact of trade on jobs. Averaging across all polls, Americans only support free trade by 6 percentage points; and a large plurality believes free trade has a negative impact on jobs. These figures both explain why Americans do not recognize their interest, as consumers, in trade; and, the need for more effective instruction.

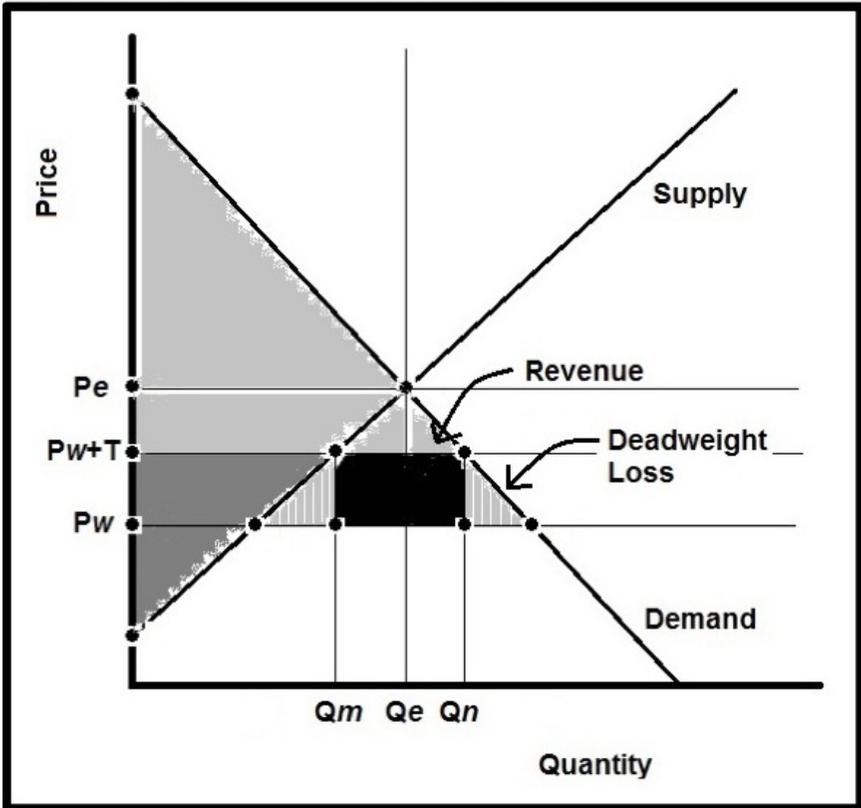
II. Adapting the Standard Model of Tariffs to Import Quotas

In the standard model of tariffs,¹ shown in figure 1, a moderate or revenue tariff in the amount T reduces consumer surplus (light gray area) from what would be consumer surplus in free trade; increases

¹ For more complete discussions of tariffs, quotas, and protectionism in general, see Bhagwati (1988) and Tumlir (1985).

producer surplus (or profit contribution; dark gray area) from what it would be in free trade; generates government revenue (black area); and results in a deadweight loss (stripped area) of two small triangles.²

Figure 1. Economic Analysis of a Tariff



A tariff such as that shown in figure 1 might be called a revenue tariff because it generates meaningful revenue for the government (again, the black area). Indeed, if the government were restricted to only generating revenue from tariffs and excise taxes, as the US government was prior to the adoption of the Sixteenth

² In the standard model, the supply of imports is presumed to be infinitely elastic at price P_w , and the domestic economy is presumed to be competitive. In autarky, the equilibrium price and quantity would be P_e and Q_e . In free trade, the equilibrium price would be P_w . Domestic consumption, domestic supply, and the amount imported in free trade are unlabeled to avoid clutter. For more, see “Free Trade” (n.d.).

Amendment, it could be argued that the tariff would have to primarily be a revenue tariff. Even so, a degree of protectionism would result.

With the model for tariffs shown in figure 1, it is easy to show the effects of an import quota that has the same effect in restricting imports. An import quota in the amount $Q_n - Q_m$ is the counterpart to a tariff in the amount T . Reading up from the horizontal axis, an import quota in the amount $Q_n - Q_m$ does the trick in raising domestic price to $P_w + T$. The only change to the chart is the interpretation of the black area. With a tariff, the black area is revenue to the government. But there is no revenue to the government with an import quota. The black area *and* the two triangles are deadweight loss. Where does the black area go?

Import quotas, like tariffs, shift a chunk of social surplus from consumers to producers. You might think consumers would oppose this shift, but consumers are generally unaware of consumer surplus. Nevertheless, there is a problem with tariffs: they invite retaliation. Foreign producers are keenly aware of increases in tariffs and will ask their governments to retaliate by increasing their (the foreign government's) tariffs. The possibility of a trade war either keeps agitation for protectionist policies in check or else results in a mutually harmful trade war.

Import quotas avoid retaliation by sharing a chunk of the former social surplus with foreign producers, who are the only meaningful opponent to tariff increases. Although the foreign producers will have to cut back their exports, they will enjoy a higher profit margin on each unit shipped. The transformation of what would be government revenue with a tariff into a subsidy to foreign producers with an import quota makes the cost of protectionism higher. But, as long as consumers remain ignorant of their interest in free trade, import quotas are sustainable, and domestic producers can obtain the transfer of social surplus from consumers that they desire.

III. An Example: Voluntary Export Restraints

A useful example of the economics and politics of import quotas is Japan's Voluntary Export Restraint on automobile exports to the United States. These export restraints were to be a temporary aid to the US automobile industry during the 1980s.³ But the export restraints became more or less permanent. More recently, these export

³ Niskanen (1988), a member of President Reagan's Council of Economic Advisors, provides a surprisingly candid discussion of this policy.

restraints were not addressed in the 2019 US-Japan Trade Agreement, although President Trump indicated they would be addressed in subsequent negotiations (Lawder and Mason 2019). The current administration has not announced an intention to revisit the matter. There is some question of the continuing relevance of the export restraints given the growth of assembly plants in the US of Japanese and other foreign automobile companies and the less-than-complete utilization of quotas.

Berry, Lenin, and Pakes (1999) estimate the amounts by which Japan's voluntary export restraints reduced consumer surplus, increased producer surplus, and transferred money to foreign producers (what would have been revenue to the government with an equivalent tariff; the black area in figure 1) over the period 1981–90. Their model is quite detailed, tracking sales by model, the ups and downs of the business cycle, and the introduction of and then changes to the export restraints. They estimate that the export restraints transferred \$10 billion to foreign producers, in 1983 dollars.⁴

While the initial distribution of licenses under an import quota may be made on a basis such as historical shares of the market, in the long run, some other method will bring about a kind of equilibrium. One possibility is the auctioning of licenses, which could mimic a revenue tariff as shown in figure 1 (Bergsten et al. 1987; Feenstra 1989). As mentioned above, in the long run, foreign producers can open plants to produce their product locally, bypassing the quota. It is also possible that government officials will capture the rents created by import quotas via corruption, whether in outright bribes, campaign contributions, or otherwise (Dutt 2009).

IV. Conclusion

Import quotas present an opportunity to use economic analysis to deal with a complex phenomenon involving relations between domestic producers and consumers, and also foreign producers. Unfortunately, the standard model of import quotas isn't connected to the standard model of tariffs and, so, is unnecessarily confusing. By tying the models of tariffs and import quotas together, the partial equivalence of tariffs and quotas is made clear, as is the transformation of what would be revenue with a tariff into a subsidy to foreign producers with an import quota.

⁴ Bryan and Humpage (1984) develop their own estimates and discuss the early literature.

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