

A MODEL TO EVALUATE THE ECONOMIC COSTS AND BENEFITS OF DUMPING AND SUBSIDIES

To examine the economic impact of AD/CVD laws, this paper employs a comparative-static framework of analysis that is frequently used in the analysis of international trade policies. The basic model is represented graphically in Figure 1. Unlike other studies, this analysis considers the gains and losses due to unfair trade. That is, but for the market distortion of a subsidy or dumping, a free-trade market equilibrium would prevail, with higher prices for domestic producers and all sources of imports. This study also



reconsiders a major assumption of the comparative-static framework of analysis, namely that all inputs released from the domestic industry as a result of the unfairly traded imports are seamlessly absorbed into the U.S. economy with no economic loss. Finally, this study attempts to value the interest costs that arise from unfair trade.

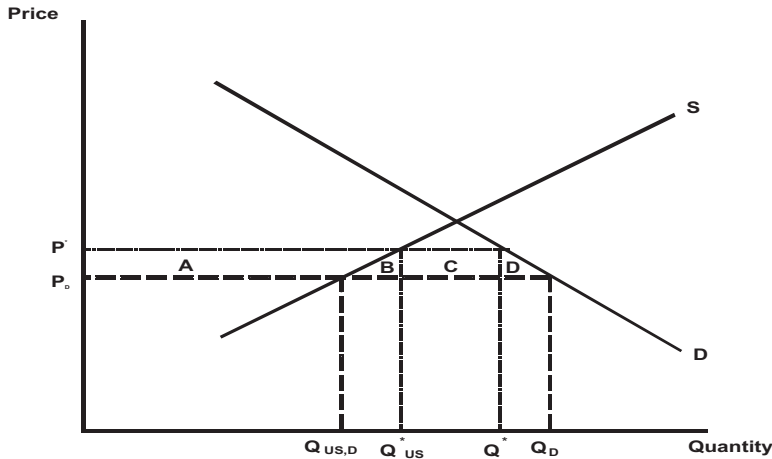
The comparative-static framework of analysis identifies four sources of consumer gains from dumped imports. These sources are shown in the figure below, where an asterisk represents the equilibrium without dumping, the subscript D represents the equilibrium with dumping, P represents price and Q represents quantity.²² Areas A and B are gains to consumers that come at the expense of domestic producers, who sell fewer products and receive lower prices for those products. Area A is commonly referred to as lost “producer surplus”. It represents lost economic profits to the domestic industry. These economic profits include extra returns on labor and capital. Area B is commonly referred to as an “efficiency gain” because it represents the added efficiency of moving resources from the industry afflicted by dumping to other areas in the economy where those resources can be used more profitably.²³ However, a critical assumption underlies this interpretation of B: the resources released by the domestic industry, including the rectangular area under area B, are absorbed seamlessly into other sectors of the economy. This simplifying assumption is, to put it mildly, quite optimistic about the effects of economic dislocation.

Take the steel industry as an example. The domestic coal used to produce steel does not get absorbed by other industries immediately, and may have to be sold at significantly lower prices in the future. Supplier industries in turn reduce spending in response to lower steel demand. Moreover, steel producers faced with lower sales and prices do not immediately lay-off workers. The firms earn lower revenues and income before they adjust to competing with dumped products. And laid off workers do not immediately find jobs in which they can add value, nor do the new jobs pay as much as the old ones lost due to the market distorting behavior.²⁴ In other words, the simplifying assumptions related to area B more often than not do not match reality. While such economic losses are an uncomfortable reality of capitalism, they are generally accepted when caused by new technology or better management at competing firms. In the case of dumping or subsidization, these losses often flow directly or indirectly from market distortions created or encouraged by foreign governments. The gains to consumers represented by area B are not mere “efficiency gains”, but are instead pure losses to the U.S. firms, workers, and input suppliers to the industry afflicted by dumping. Thus, contrary to the conventional interpretation, we view area B as a direct loss to producers in the industry and to their workers and suppliers.

22 This graphical presentation assumes that dumped imports, fair imports, and the domestic product are perfect substitutes. The conclusions hold if the three groups of products are imperfect substitutes as well.

23 Prior to the dumping, these resources are considered to be efficiently used. Thus, it is the distortion of dumping that causes these resources to be considered “inefficient”.

24 Economists have no trouble recognizing the losses resulting from economic dislocation when they occur outside the context of international trade. See, for example, Joseph E. Stiglitz, Jonathan M. Orszag, and Peter R. Orszag, *The Impact of Asbestos Liabilities on Workers in Bankrupt Firms* (Sebago Associates, December 2002) at 28-29.

Figure 1. Impact of Dumping in the Comparative-Static Analytical Framework

Area C in the figure above represents losses to fairly traded imports. Like domestic producers, firms that supply fairly traded imports are adversely affected by dumping as their prices and sales quantities decline due to the presence of dumped imports. This lost revenue is another source of the gain to domestic consumers of the product affected by dumping.

The only area that is a pure gain to consumers is area D, which represents the gains to consumers from being able to increase consumption of the dumped product. This area is the only benefit to consumers that does not come at the expense of the other actors represented in the comparative-static framework of analysis.

To assess the producer costs and consumer benefits of dumping, we apply the following methodology. First, we apply data from antidumping and sunset investigations to a partial equilibrium model.²⁵ This model specifies an equilibrium for each year in which there is dumping. The dumping margin is set to zero to calculate a new equilibrium in which there is no dumping (or subsidy).²⁶ The two equilibriums are used to calculate the following:

- **THE DIRECT PRODUCER COSTS OF DUMPING IN THE FORM OF LOST PRODUCER REVENUE.** In other words, we calculate the lost revenue to the domestic industry caused by the unfair trade using the dumping (and/or subsidy) margins calculated by the Department of Commerce.
- **THE INDIRECT EFFECTS OF DUMPING ON INDUSTRIES THAT SUPPLY THE INDUSTRY AFFECTED BY DUMPING.** For this, we use industry-by-industry total requirement tables to derive indirect industry mul-

25 For an explanation of the model used, See Kenneth H. Kelly and Morris E. Morkre, *One Lump or Two: Unitary Versus Bifurcated Measures of Injury at the USITC*, Working paper No. 282, Bureau of Economics, Federal Trade Commission (March 2006) at 8 to 12.

26 No adjustment is made for internal transportation costs or duties on fairly traded imports.

multipliers. These multipliers are then applied to lost industry revenue to estimate the impact of lost domestic sales on suppliers and secondary suppliers.

- **THE ONE-YEAR FINANCIAL COST OF DUMPING.** This cost results from the fact that the United States runs a large current account deficit and must borrow from abroad to finance any increase in imports.²⁷ An increase in imports due to dumping causes additional borrowing and interest payments that would not occur in the “but-for” world of no dumping. To calculate the one-year financial cost of dumping, we multiply the one-year Treasury bill constant maturity rate by the increase in the value of imports due to dumping for that year.
- **THE PORTION OF THE CONSUMER SURPLUS THAT DOES NOT COME AT THE EXPENSE OF ANOTHER ACTOR IN THE SYSTEM.** This value, represented by area D, is calculated, as suggested by the geometry above, by multiplying by 0.5, the increase in the quantity consumed, and the decrease in the market price resulting from dumping.

The estimates provided in this report should be kept in perspective. First, the dumping margins sometimes reflect the fact that foreign producers did not cooperate with the Department of Commerce during the unfair trade investigation. In such cases, the Department has no choice but to use information from the petition. Petition margins tend to be higher than those ultimately found by the Department when the firms under investigation cooperate fully. In cases when the Department utilized “facts available” to estimate the dumping margins, the lost-revenue, indirect effects, financial costs, and consumer gains due to dumping will be inflated.

Second, other variables important to the results, such as the elasticities of aggregate demand and substitution used in the model, also have a margin of error. The USITC typically provides a range of elasticity estimates. Our convention is to choose the mid-point of the various elasticity ranges provided by the Commission. In some cases, we strayed from this convention when common sense or modeling results suggested a value at the low or high end of the Commission range was more appropriate than the mid-point. Third, there are other gains associated with imports aside from consumer gains that we do not attempt to measure, such as the dynamic gains from trade.²⁸ However, the existence of dynamic gains that may result from trade based on comparative advantage is not all that certain when the increase in imports is caused by market distorting practices such as subsidies and dumping. If

27 Increasingly, the borrowed funds come from foreign governments who purchase U.S. government and agency securities.

28 There are also indirect gains from higher imports, such as increased in port activities. We have not measured these offsetting indirect effects, and believe they are substantially smaller than the indirect effects experienced due to lost domestic production.

employees dislocated due to dumping were consistently employed in higher productivity industries, one would expect them to have consistently higher wages upon reentering the workforce. Empirical research indicates that displaced workers in general face poorer employment prospects, an increased probability of working part-time, lower earnings due to shorter hours and lower wage rates, and substantial earnings losses on average, even if employed full time.²⁹ Under these circumstances, it is not at all clear that there are substantial dynamic gains from imports inflated by unfair trade.

Finally, the overriding result of the modeling exercise is to demonstrate that the pure gains from unfair trade, the gains that do not come at the expense of fairly traded imports and domestic production, are relatively small compared to the revenues lost by the domestic industry, and are often not significantly higher than the financial costs associated with higher imports. Given the potentially large direct and indirect economic losses due to dumping and subsidies that the conventional analysis assumes away, the relatively small pure consumer gains from dumping are hardly attractive. Under these circumstances, the economic case for weakening U.S. trade laws, whether unilaterally or in response to new international trade agreements, is not persuasive.

²⁹ Henry S. Farber, *Job Loss in the United States, 1981-1999*, Working Paper # 453, Princeton University Industrial Relations Section (June 2001) at 12-31.