



Kiel

Working Papers

**Kiel Institute
for the World Economy**



**Are Unfair Import Laws Unfair to
Developing Countries: Evidence
from U.S. Antidumping Actions
1990-2004**

by M. Morkre, D. Spinanger, L. Tran

No. 1438 | August 2008

Web: www.ifw-kiel.de

Kiel Working Paper No. 1438 | August 2008

Are Unfair Import Laws Unfair to Developing Countries: Evidence from U.S. Antidumping Actions 1990-2004*

Morris Morkre, Dean Spinanger, and Lien Tran

Abstract:

This paper investigates the effects of U.S. AD actions on DCs. It first considers administrative actions by the U.S. Department of Commerce, which decides AD margins for countries. It then considers decision making by the U.S. International Trade Commission, which determines injury to domestic industry. The econometric results show that USDOC actions lead to significantly higher AD margins for NMEs (all DCs) than for MOEs. Among countries that suffer from U.S. AD actions DCs have a significantly higher ratio of dumped imports to total imports (relative dumped imports) compared with middle income countries. However, the results also show that relative dumped imports of high income countries are also greater than middle income countries.

Keywords: antidumping (AD), AD margin, developing countries (DCs), market-oriented economies (MOEs), nonmarket economies (NME), relative dumped imports, underselling, zeroing

JEL classification: F13, K42

Corresponding author:

Dean Spinanger

Weddelbrook 7

24576 Weddelbrook

Tel: 04192-6990

E-Mail: dspinanger@googlemail.com

** Morkre and Tran are economists at the Federal Trade Commission in Washington D.C. Spinanger is an economic consultant in Germany and formerly Senior Research Fellow at the Kiel Institute for the World Economy. The views expressed in this paper are those of the authors and do not necessarily represent the views of the Federal Trade Commission or any individual Commissioner. Finally, we are also indebted to Keith Anderson, Ken Kelly, Dave Schmidt, and Chris Taylor for helpful discussions on issues raised in this paper and to comments of participants at the IIOC meetings held at Arlington, VA in May.

The responsibility for the contents of the working papers rests with the author, not the Institute. Since working papers are of a preliminary nature, it may be useful to contact the author of a particular working paper about results or caveats before referring to, or quoting, a paper. Any comments on working papers should be sent directly to the author.

Coverphoto: uni_com on photocase.com

ARE UNFAIR IMPORT LAWS UNFAIR TO DEVELOPING COUNTRIES?
Evidence from U.S. Antidumping Actions 1990-2004

Morris E. Morkre, Dean Spinanger, and Lien H. Tran¹

July 1, 2008

I. Introduction

There is general agreement among economists that antidumping laws are costly to the countries that use them and harmful to the countries that are subjected to their penalties. For example, Bhagwati (1988), Finger (1993), Krueger (1999), and Stiglitz (2002) find that antidumping laws lead to various adverse effects as they inhibit international trade in several ways. Blonigen and Prusa (2003) provide a useful survey of the literature that studies the problems with antidumping. In the context of the Doha round, with its focus on economic development, underlying the concern about AD laws is a belief that the these laws in the U.S. and other Industrialized Countries (IC) are particularly harmful in their effect on Developing Countries (DC) (Kufuor (1998), UNCTAD (2000)).

The Antidumping Law (AD) of the U.S. provides relief to domestic firms competing with imports. It has become recognized as an import restraint that is costly to U.S. consumer welfare. In a well known study of the consequences of antidumping in the U.S., Gallaway, Blonigen, and Flynn (1999) estimated that AD duties cost the U.S. economy as much as \$4 billion in lost income (in 1993). Their estimate, derived from a

¹ Morkre and Tran are economists at the Federal Trade Commission in Washington D.C. Spinanger was until recently a Senior Research Fellow at the Kiel Institute for the World Economy is now an economic consultant in Germany. The authors are grateful to Research Assistants and Summer Interns who provided valuable data support at various times. The Research Assistants who helped us were Sandy Lin, Van Brantner, Nandu Machiraju, James Maloney, and Shirley Min. The Summer Interns were Brian Hall, Matt Oxenford, Christine Lipuma, Iris Zhang, and Richard Tao. The views expressed in this paper are those of the authors and do not necessarily represent the views of the Federal Trade Commission or any individual Commissioner. Finally, we are also indebted to Keith Anderson, Ken Kelly, David Schmidt and Chris Taylor for helpful discussions on issues raised in this paper.

CGE model, also included the costs of lesser used countervailing duties against imports benefiting from foreign subsidies

The U.S. Antidumping Law allows for the imposition of special tariffs on certain specified imported products from named countries. Alternatively, foreign producers may agree with U.S. authorities to restrict their exports under suspension agreements. These tariffs and agreements are permitted under the WTO. They are intended to offset the injury to domestic industries caused by unfairly traded imports. However, what constitutes unfairly traded imports is subject to interpretation. Although U.S. AD laws do not explicitly single out Developing Countries for differential treatment, U.S. government officials have considerable discretion in administering the law (e.g., Finger (1993, chap. 2).

The issue we explore here is whether procedures used by the U.S. administrators systematically discriminate against DCs in the sense that the actions taken by the U.S. result in the imposition of a heavier burden on DCs than on other countries. This paper provides empirical evidence on the issue by drawing on a sample of AD cases, specifically those initiated in the U.S. over the 15 year period from 1990 to 2004 that resulted in restrictions on imports.

Whether AD laws of ICs are particularly harmful to DCs is a subject that has been examined in recent years in a number of papers by Michael Finger, among others, beginning with Finger (1981). More recently, Blonigen (2006), Bown, Hoekman, and Ozden (2003), Clark (1998) and Moore (2006), have also contributed to this research. So in part the present paper provides an update on evidence about the DC discrimination issue. However, we also provide what we believe are better empirical estimates of the effects of AD law on DCs.

II. A Preview of the Issue

The necessary first step in our examination of the relationship between U.S. AD actions and types of supplier countries concerns measurement. There are several ways to measure the impact of U.S. AD actions on the countries that export to it. One is the number of AD petitions filed against each foreign country over time. However, this does not take account of the value of total imports from each country. Another is the number of petitions against a country divided by total imports from that country. This is referred to as the “incidence” of AD actions (Finger and Murray, 1993, p. 244). But this does not take account of considerable differences that can exist among AD cases. For example, for some cases, such as melamine dinnerware from Indonesia, the value of dumped imports was only \$127 thousand. For other cases, such as tomatoes from Mexico, dumped imports exceeded \$400 million. AD cases are obviously not of equal importance. Another incidence-type measure is the ratio of imports for the product groupings (e.g. 4-digit SIC industries, 8-digit HTS product categories) covered by AD actions divided by total imports. But AD restrictions typically only apply to parts of each of these product groupings. Each of these measures is an imperfect gauge of the magnitude of the impact

of AD actions. This is done most directly by considering the value of imports directly affected by AD actions. That is the measure used in this study.

Data availability has weighed heavily in directing the use of different measures of AD activity. Fortunately, information about U.S. AD dumping cases is now more readily available. Two important sources are the datasets created by Bruce Blonigen and by Chad Bown (2007) that are available on the internet.² However, for this study it was necessary to construct a special dataset that focuses on securing values for dumped imports over the period 1990 to 2004.

The AD cases initiated during 1990-2004 resulted in AD duties (or suspension agreements) imposed on foreign exporters in 45 countries. This is a relatively small group of countries in relation to the total number of countries that exported to the U.S. In 2004 the U.S. had imports from a total of 231 countries. But the 45 countries affected by AD actions accounted for 85 percent of total imports. The 186 countries not affected (as a group) were relatively small exporters to the U.S. Moreover, most of them are DCs. These countries were never forced to accept AD orders either because their shipments were too small or they involved products that did not cause significant injury to domestic industries.

The relationship between level of development and the importance of U.S. AD cases is shown in Figures 1, 2, and 3. Such diagrams were used earlier by Clark (1998) to assess whether various U.S. import restraint policies adversely affect developing countries. They plot the relationship between cumulative U.S. total imports, on the horizontal axis, and cumulative dumped imports, on the vertical axis. Countries are arranged in order based on GDP per capita (PPP basis).³ Thus the import performance of the poorest countries is closest to the origin. If all countries were affected equally by U.S. AD, the plot of cumulative AD imports against total imports would lie on the 45 degree line from the origin. This means that the DC share of dumped imports was the same as the DC share of total imports. On the other hand, if U.S. AD actions were taken disproportionately against DCs, then the plotted curve in the diagram would be above the 45 degree line. DCs would be accounting for a larger share of dumped imports than total imports. Finally, the relative impact of U.S. AD actions across countries may have changed over the 1990 to 2004 period, for example in response to implementation of the WTO agreements in 1995. We therefore divide the fifteen year period into three five-year subperiods. Figure 1 is for 1990 to 1994, Figure 2 for 1995 to 1999, and Figure 3 for 2004.

The three figures suggest an important change in U.S. action toward DCs over time. In Figure 1 the plotted line is close to the 45 degree line. South Korea and Japan are seen to be relatively hard hit by AD actions and in both instances these countries return the curve back to (and past) the 45 degree line.

² The website for Blonigen is <http://darkwing.uoregon.edu/~bruceb/adpage.html>. That for Bown is http://people.brandeis.edu/~cbown/global_ad/. Neither dataset has value of dumped imports.

³ The income data are for 1999 and from the [CIA World Factbook](#).

Figure 2 begins to show discrimination of AD against DCs, particularly when cumulative total imports exceeds 10 percent. Russia and, to a lesser extent, South Korea had relatively large shares of their exports to the U.S. come under AD control.

Figure 3 shows the sharpest pattern of adverse impact of AD against DCs. Virtually the entire plot is above the 45 degree line. The outstanding observation here is China. China alone accounted for more than 40 percent of all U.S. dumped imports during 2000 to 2004.

An index developed by Suits (1977) quantifies the extent of U.S. AD discrimination against DCs. The Suits index is defined as $S = 1 - L/K$, where K is the area below the 45 degree line and L is the area below the plotted curve. For example, if L is equal to K, then $S = 0$ and no discrimination is indicated. If the plotted curve is above the 45 degree, then S is negative, which indicates discrimination. The bounds on the Suits index are -1 and +1. The calculated values for S for the three Figures are as follows. For Figure 1, $S = 0.04$; for Figure 2, $S = -0.15$; for Figure 3, $S = -0.5633$. Thus, while U.S. AD actions appear to impose a particular hardship against DCs, this treatment is of relatively recent origin.

III. Possible Sources of Bias in U.S. AD Law against DCs

The U.S. antidumping law provides for the imposition of special tariffs in the form of AD duties on imported products found to have been dumped. Although AD duties are permitted under international agreements (the GATT/WTO) they cannot be imposed without a formal investigation by the U.S. Government that reaches two affirmative findings. The investigation must find that: (i) the cited imports are priced at less than normal value – priced at less than fair value (LTFV) -- and (ii) a domestic industry is either suffering material injury as a result of the LTFV pricing of the imports or is threatened with such injury.⁴ The terms “normal value” and “material injury” are legal expressions that are determined on a case by case basis by the administering authorities.

While U.S. antidumping law does not specifically single out DCs for differential treatment it is possible that the manner in which the law is administered does in fact discriminate against them. U.S. AD law is administered by two different federal government agencies: the Department of Commerce (USDOC, or Commerce), which is formally a part of the Administration, and the U.S. International Trade Commission (USITC), which is an independent regulatory agency. Commerce is responsible for determining whether allegedly dumped imports are dumped. If USDOC finds dumping it must also calculate the amount of dumping, which is measured by the antidumping (AD) margin. This margin is the percent by which the price of the dumped import product must increase to equal normal value (NV). The USITC is responsible for determining whether a domestic industry is materially injured by dumped imports.

⁴ WTO, Agreement on Implementation of Article VI of the General Agreement on Tariffs and Trade 1994, Art. 2.1 and note 9.

There is considerable scope for discretion by the two agencies that administer the AD law, e.g., as discussed in various chapters by Boltuck and Litan (1991), Lindsey and Ikenson (2002), and Blonigen (2006) regarding the USDOC; Cass and Knoll (1997) and Sykes (1997) regarding the USITC. But in general terms this is not surprising. Under the so-called *Chevron* doctrine U.S. courts grant ample latitude to U.S. agency decision-makers to discharge their duties regarding the statutes they are responsible for administering.⁵ However, some discretionary actions by Commerce or the USITC have come under severe criticism for being excessively biased against foreign exporters. Probably the most extreme example is the USDOC policy of “zeroing”. This refers to a methodology long used by USDOC, and by the Treasury Department before it, to calculate AD margins.⁶

To illustrate, consider a basic international price discrimination case. The AD margin for a foreign firm is based on a comparison of prices charged U.S. and home country (home country to the exporter) customers for the same good over the period of investigation (POI).⁷ In the simplest case USDOC finds NV by calculating the average of all home country prices over the POI and then compares prices for each U.S. transaction with this NV. Some U.S. prices may be below NV and others above. Zeroing refers to the assignment of the value zero to all of the latter. The calculated average margin across all transactions is therefore distorted: the AD margin is biased upward. Not surprisingly zeroing has been sharply criticized by both economists and legal scholars for some time.⁸ Zeroing has also been one of the most actively litigated

⁵ The *Chevron* doctrine is discussed generally by Carlton and Picker (2007, p. 10). They suggest that *Chevron* makes the agencies subject to a measure of Congressional control. This is reinforced in the case of AD by the particular interest of Congress with AD laws and procedures. Finger (2000, p. 199) observes that Congress sought to reassert a measure of influence over U.S. international trade policy (vs. the Executive Branch, which largely controlled other areas of trade policy) through the AD law and that this was reflected by the appreciable increase in AD actions since the early 1980s.

⁶ The U.S. Department of the Treasury was responsible for determining AD margins before 1980, when Congress transferred this authority to the USDOC.

⁷ The period of investigation (POI) for AD investigations was generally six months before 1995 and 12 months for MOEs from 1995. The POI was generally six months for NMEs throughout.

⁸ In the words of one legal scholar, zeroing is “[t]he most blatant distortion in the Commerce Department’s administration of the U.S. antidumping law....” Bhala (1995, p. 67) Among economists Baldwin and Moore (1991, p. 271) were similarly critical noting that if U.S. and foreign prices vary over time but are exactly the same on each day zeroing would lead to the “absurd result” of a positive dumping margin..

practices at the WTO in recent years;⁹ the U.S. government has invariably been on the losing side and the practice has been declared illegal under WTO rules.¹⁰

Possible Biases against DCs in Making AD Margins

However, it is not known whether zeroing produces a systematic bias against particular countries. To determine that it would be necessary to know the distribution of U.S. and home country prices in particular cases. For example, if prices charged by exporting firms from DCs have a greater dispersion than firms from ICs, other factors remaining the same, then zeroing would result in higher AD margins for companies from DCs. But such distributions are not available. However, there are other ways in which Commerce procedures differentiate between countries.¹¹ One of the most notable concerns the different procedures used by USDOC in dealing with cases involving nonmarket economies (NMEs) versus market-oriented economies (MOEs). In particular, this refers to how USDOC determines NV for firms in the two types of economies. There are NMEs in the IC group, but more typically NMEs are in the DC group.¹²

For firms in MOEs margins are obtained in one of five ways.¹³ The upper part of Figure 4 shows them. For three of the five USDOC collects detailed data on prices and costs from the foreign firms that are investigated.¹⁴ Thus the margins are based on prices and costs for actual market transactions. The first method is price discrimination (PD), where NV is based on ex factory prices charged by the foreign firm on sales of the same or comparable product to its home country customers. According to U.S. law this is the

⁹ Although zeroing was the established practice at USDOC/Treasury for some time, possibly several decades, and identified by economists as distorting published AD margins some twenty years ago (Boltuck (1987), see also Boltuck and Litan (1991)) it is somewhat surprising that it took so long for foreign countries to overturn the practice at the GATT or WTO. However, in his review of the history of the zeroing issue at the GATT/WTO, Kim (2002) recounts that it had been objected to as early as 1989 by the Nordic countries in a submission made during the Uruguay Round. But matters have changed recently. As a result of a number of challenges by several trading partners, notably by Canada in a case involving Softwood Lumber, the WTO ruled against the U.S. on zeroing in 2006, e.g., Gantz and Bhala (2007, p. 46f.). In response, Commerce has recently announced that it is changing its practice in calculating AD margins. 71 FR 77722 (“Antidumping Proceedings: Calculation of Weighted-Average Dumping Margin During an Antidumping Investigation; Final Modification”)

¹⁰ See the 2006 annual survey of AD cases considered by the WTO’s dispute resolution process by Bhala and Gantz (2007), p. 207.

¹¹ Since many of the details about USDOC procedures have been discussed recently by Moore (2006), USGAO (2006), and particularly by Blonigen (2006), we will focus on selected issues.

¹² This depends of course on how DCs are defined. As we define the term (in section IV), all NMEs are DCs.

¹³ If the investigation includes several different products (or models) produced by a foreign firm that are exported to the U.S., then each of the products may be assessed separately, using one of the five alternatives shown in Figure 4. However, the firm will typically be assigned a single margin covering all the products.

¹⁴ Before 1995 Commerce investigated the leading exporters that accounted for not less than 60 percent of the country’s exports to the U.S. From 1995 Commerce attempts to investigate all exporters, or if not practicable, a representative collection of exporters, or the leading exporters. USDOC (1991), chap. 4, p. 8 and USDOC (1997), chap. 4, p. 11.

preferred method.¹⁵ However, it is not the method that is used if the foreign firm is selling the relevant product below cost of production (COP) to its home country customers to a significant extent. The second method covers cases where USDOC in effect increases NV by excluding transactions where foreign price is below cost.¹⁶ Under this method therefore NV is based on foreign price adjusted by results of a cost test (PD w/COP). The third method is for cases where all of the foreign firm's sales to home customers are below cost. Then NV is based on constructed value (CV). CV is found by adding production costs, selling, general and administrative costs, and profits, and then dividing the total by quantity exported. Additionally, Commerce presumes selling below cost in situations where a foreign company does not supply the relevant product to its home market and uses CV for NV. Thus, cases that involve CV are a subset of cases where COP affects the determination of NV.

In contrast, for cases involving NMEs Commerce obtains margins in one of three ways, as shown in the lower part of Figure 4. USDOC regards all prices and costs as arbitrary and all firms are presumed to be controlled by the government. Thus, whatever the method used to calculate them, the margins in these cases are also essentially arbitrary. For a firm in an NME to qualify for an individual AD margin it must pass a "separate rate" test in which it demonstrates that it is free to conduct its export operations independently, that is independent of control by the government.¹⁷ NV in NME cases is found using the Factors of Production (FOP) method. With one exception, NV is found by starting with the quantities of the inputs reported by the foreign firms under investigation. The input quantities are then valued using prices taken from a surrogate MOE country. NV is the sum of the resulting unit cost plus estimates of overhead, general expenses, and profits based on information from selected companies in the surrogate country.¹⁸ The exception has to do with imported intermediate goods used in the production of the products under investigation. Their value as a component of NV is based on imports. Given NV, the calculation of the AD margin for an NME firm is the same as that for its MOE counterpart.

Commerce also uses other discretionary procedures that could give an upward bias to AD margins for DCs. Perhaps the most important is Facts Available (FA).¹⁹ This covers the four remaining alternatives open to USDOC shown in Figure 4. FA arises

¹⁵ Sec 773(a)(1) of Title VII of the 1930 Tariff Act.

¹⁶ Before 1995, when Commerce found that less than 10 percent of foreign home sales (on a quantity basis) were at prices that were less than COP, then they were deemed minor and there was no affect on the way Commerce calculated Normal Value. However, if more than 10 percent of such sales were less than COP then such sales were deleted from the sample of transactions used by Commerce to calculate Normal Value. The 10 percent threshold was changed to 20 percent in the Uruguay Round. Before the Uruguay Round Commerce announced that it would resort to using CV for Normal Value when home market sales exceeded 90 percent of transactions, as part of a so-called "10/90/10 test." But the courts did not approve the 90 percent cut off to ignore all sales in the foreign home market; USDOC responded by using CV only if all foreign sales were less than cost. U.S. Congress (1994), p. 808; USDOC (1991), chap. 8, p. 59; USDOC (1997), chap. 8, p. 73.

¹⁷ USDOC made this policy explicit in Sulfanic Acid (preliminary USDOC determination, 57 FR March 18, 1992, 9409).

¹⁸ USDOC (1997), chap. 8, pp. 84-93.

¹⁹ Before 1995 FA was called Best Information Available (BIA). BIA was renamed FA under the WTO.

when USDOC decides there are serious deficiencies with the information provided by foreign firms. USDOC then relies on alternative sources of information, and not just for NV, but for the AD margin itself. This applies to cases involving both MOEs and NMEs. The degree to which USDOC uses FA varies considerably across cases. Commerce uses two levels of FA as explained in the 1989 decision on antifriction bearings.²⁰ The difference between them is based on the degree of co-operation USDOC receives from foreign firms. If a foreign firm cooperates partially, then ordinary facts available (FA) is applied. If a foreign firm does not cooperate at all, then adverse facts available (AFA) is used. For ordinary FA, USDOC usually obtains an AD margin by relying on the average of the margins in the petition or an average of the margins calculated for other firms that are investigated. For AFA, USDOC usually obtains a margin based on the higher of (i) the highest margin from the petition or (ii) the highest margin found for other firms.

There is considerable discretion for USDOC to decide when to use FA. But foreign firms can also appeal USDOC decisions to the reviewing courts -- and some have been successful -- so there are constraints on the use of FA.²¹

Finally, there is the compliance burden issue. It is possible that DCs are more prone to AFA because they are less likely to be able to respond satisfactorily to USDOC requests to foreign firms for data and information.²²

The above discussion provides a brief review of how AD margins are found for individual companies. However, for present purposes we require an AD margin that reflects the duty rate that applies to the source country. As explained below, for this purpose we use the "All Others" (AO) rate reported for MOEs and the "country-wide" rate for NMEs.

Subject to some qualifications, the AO rate for MOEs is a weighted average of the AD margins found for individual firms. The AO rate is roughly comparable to the weighted average tariff rate for a product grouping used in studies of trade policy issues of particular countries.²³ However, the country-wide rate for an NME has no necessary

²⁰ 54 Fed. Reg. 19033 (antifriction bearings from Germany).

²¹ "While the statute does not define 'best information available', it 'grants to Commerce broad discretion to determine 'best information available' in a reasonable manner on a case-by-case basis" Timken Vo. v. United States, 2001 CIT 96, 166 F. Supp. 2d 608, 616 (2001). Moreover, the discretion granted to Commerce on FA "...is constrained by the underlying objective of the statute; to obtain the most accurate dumping margin possible." Citic Trading Co. Ltd. Et al. v. U.S., USCIT, Slip-Op 03-23, 15, note 12 (2003).

²² There are several aspects of the DOC process relevant here, including (i) the burden of lengthy and complex questionnaires used by DOC, (ii) the tight time deadlines imposed on foreign firms to comply with DOC requests, (iii) the difficulty of translating foreign documents into English. But as discussed by Cass and Narkin (1991), the U.S. reviewing courts exercise some restraint on the use of BIA/FA by DOC.

²³ However, the AO margin differs from the general weighted average tariff in that it ignores *di minimis* margins and (since 1995) margins based wholly on Facts Available. In addition, if all investigated firms have margins based on FA (from 1995 onward) Commerce has discretion (SAA, p. 873) to use any reasonable method to obtain an AO rate. A 2000 case that illustrates this is concrete reinforcing bars from Indonesia (A-560-811). The individual margins were all AFA, 71.01 percent (the highest rate in the petition). Commerce chose a smaller rate for the AO margin, 60.46 percent (an average of rates in the petition). 66 F.R. 8347.

relationship to the AD margins calculated for individual firms. Indeed, the country-wide rate is generally much greater than the AD margins calculated for individual firms. It applies to all fringe firms and can serve as the marginal AD rate for the NME, the rate that determines the price affect of the AD action on producers of the investigated product in the NME.

In countries such as China, the most important NME in our sample, the country-wide rate establishes a floor for the price increase by exporters in the NME that are not subject to a separate AD rate. Moreover, all companies that receive lower AD margins than the country-wide rate are, in effect, protected from having to compete with other (e.g., newer and/or smaller) Chinese companies. The difference between the low margins of some companies and the high country-wide margin may create rents. Consider the 1994 case involving pencils.²⁴ The original AD order was issued in December 1994. The average price for pencils from China (landed MFN duty paid) increased 46 percent from 1994 to 1995. The China-wide AD margin was 44.66 percent and was based on AFA. There were four individual rates, none of which were based wholly on FA or AFA: two were zero, a third was 8.31 percent and the fourth was 17.45 percent.²⁵ If nothing else changed to affect costs or prices of these firms these results suggest that rents, possibly substantial, were captured by two and possibly three Chinese firms. Moreover, it could be in the interest of the NME Government to support rent seeking firms by helping to ensure that the country-wide rate is high. One way to accomplish this is for the NME government to fail to cooperate with USDOC when it requests information about fringe firms. USDOC then resorts to AFA for the country-wide rate. AFA for country-wide rates is very common in NMEs. In our 1990-2004 sample period, this was the case for 72 out of 93 AD investigations involving all NMEs, and 54 out of 60 investigations involving China. But even assuming that the government did cooperate with the rent seekers, presumably for a share of the rents, there does not appear to be a significant adverse effect on NME growth, particularly for China in recent years.²⁶

The above argument suggests that the country-wide rate is the relevant AD margin to use to measure the impact of the AD order on an NME. However, there are also cases where all the AD margins are so high as to be prohibitive. For example, in the 2002 case involving Saccharin from China the country-wide rate was 329 percent.²⁷ There were two separate rates for two individual exporters; they were also very high, 249 percent and 292 percent. After the AD order was issued in June, 2003 imports fell to zero. Both the country-wide rate and the two separate rates were based on AFA. In such cases the

²⁴ Cased Pencils from China, 2000, USITC Pub 3328, Investigation 731-TA-669 (Review), p. I-5, note 10.

²⁵ The rates were based on the company that was the producer of pencils. Chinese exporters were also involved in the case and the AD rates applied to them depended on the supplier. One company's AD margin was based on partial FA since it did not supply the data USDOC requested on all of its sales during the period of investigation. 59 F.R. 55630.

²⁶ For example, Murphy, Shleifer and Visny (1993) argue that rent seeking is harmful to a country's growth. They distinguish between rent seeking by private individuals and by public officials. They argue that since new activities and enterprises are more likely to involve interaction with the Government (e.g., getting licenses, permits) that public rent seeking would be more harmful to innovation and investment, and therefore to growth.

²⁷ Saccharin from China, Final, 2003, USITC Pub 3606, Investigation 731-TA-1013 (Final), p. 1-1 and the USDOC notice in 68 F.R. 27530.

country-wide rate overstates the impact of the AD order on the NME. Unfortunately, the magnitude of the AD rate that would just choke off exports to the U.S. is not known. With this caveat, therefore, the country-wide rate serves a rough indicator of the price effect of AD action on NMEs.

Finally, Figure 4 reports the number of country AD margins that were affected by USDOC discretionary practices in our 1990 to 2004 sample period.²⁸ However there is a complication, particularly for MOEs. Since the margins for MOEs usually involve more than one foreign firm, and as the application by Commerce of a particular practice may differ across firms, the country margin may involve two or more practices. The numbers reported in Figure 4 for each practice distinguish between cases where USDOC treated all firms in the same manner vs. where USDOC used different practices for different firms. For example, of the 201 cases involving MOEs there were 67 where FA was used for all firms. Of these 67 cases 41 were also AFA. There were 25 other cases, in parenthesis, where some but not all firms received FA, of which 19 (also in parenthesis) were partially involved in AFA. Similarly for COP and CV. There were 14 cases where all firms involved were affected by COP of which 11 were CV. There were another 99 cases where some but not all firms were selling at least some of their products below cost, of which some 81 cases found at least some firms involved with CV. Another complication is an overlap between COP and FA practices in a case. There were 19 cases where Commerce used both COP and FA for some but not all firms.²⁹ Thus, the general picture that emerges from Figure 4 is that relatively few AD cases escape some discretionary practice by Commerce. Indeed, only 15 of the 201 MOE cases and 13 of the 84 NME cases were simple PD or FOP cases respectively. For the vast majority AD margins are affected by COP or FA or both.

Possible Biases against DCs in Injury Determinations

The injury decisions in AD cases are made by the Commissioners at the USITC. Various Commissioners at the agency have used different methodologies over the years. The dominant methodology since the 1980s is the so-called bifurcated approach. Under this approach a Commissioner first decides whether an industry is materially injured and, if the answer is in the affirmative, he or she proceeds to decide whether the injury is caused by dumped imports. As explained by Durling and McCullough (2003) the Commissioners using the bifurcated approach do not use economic analysis, which provides a considerable opportunity for discretion. And as explained by Kelly and Morkre (2006) the reviewing courts have given considerable latitude to Commissioners in deciding on what methodology to use.

There are several ways in which discretion in USITC decision-making, particularly under the bifurcated approach, could be disadvantageous to DCs. The first

²⁸ The cases covered in Figure 4 do not include cases that ended in suspension agreements because the ordinary investigation was typically not completed. See Section IV.

²⁹ The duplication between COP/CV and FA/AFA means that the sum of cases on the boxes on the RHS side of Figure 4 will not give the total number of MOE cases. Thus, $15+14+99+67+25=220$. Adjusting for the 19 cases that are duplicated in the COP/CV and FA/AFA entries gives the number of MOE cases in the sample, 201.

involves the notion of underselling. At the USITC underselling occurs when the price of the dumped import product is less than the price of the competing domestic product in the U.S. market. More generally, it is a term that has been in use for more than a century. For example, underselling was sharply criticized by John Stuart Mill (1848, p. 678) who identified it as part of the "... phraseology of the Mercantile System". In that seller-oriented system domestic producers were encouraged to undersell foreign rivals in all products, and to avoid being undersold by them. However, Mill (and other classical economists before him) showed that national wellbeing was promoted by permitting international trade to be determined by the principle of comparative advantage. This would inevitably involve underselling, which was neither good nor bad per se but merely part of the competitive market process. An alternative interpretation of underselling also has a long history. It involves predation and apparently goes back at least to Alfred Marshall. According to Liebhafsky (1955, p. 345) Marshall argued that a firm with significant monopoly power might be able to destroy certain localized competitors by underselling them. Applied to international trade this is a criticism of underselling when there is predatory dumping. But based on a careful study by Shin (1998) predatory dumping in the U.S. is expected to be very unlikely.

Underselling became part of U.S. law in the 1988 Omnibus Trade and Competitiveness Act, to be used to assess the effect of unfairly traded imports on prices. It replaced the term "price undercutting". According to the Conference Report on the 1988 Law,³⁰ the reason price undercutting was replaced by price underselling was to clarify that the Law does not require evidence of predation.³¹

Evidence of underselling played an important role in USITC decision-making even before the change in the Law.³² In the view of many commissioners, particularly those using the bifurcated approach, underselling indicates that the domestic industry is injured by dumped imports. Precisely how underselling causes injury is not made clear.

³⁰ U.S. Congress (1988), p. 617.

³¹ However, as both expressions apply to predation the clarifying statement in the Conference Report is as interesting as the change in the language of the law itself. There appear to be two distinct issues involved. One was apparently to comment unfavorably on the methodology used by one commissioner, Susan Liebler, in deciding AD cases. Commissioner Liebler used a predation model, apparently the only USITC commissioner to ever adopt such an analytic framework in AD cases under the 1921 Antidumping Law. See her views in Red Raspberries from Canada (USITC Pub. 1707, June 1985, pp. 11-19). Another issue arose from disagreement among USITC Commissioners about the significance of price underselling. USITC staff had routinely assembled and presented price underselling data in the staff report portion of USITC opinions since at least 1980. Some Commissioners believed this data was valuable and used it in making their determinations. Other Commissioners were highly critical of underselling but typically only provided brief comments, often in footnotes to their opinions. A notable exception was the critique by Commissioner Ann Brunsdale in Welded Carbon Steel Pipes (USITC Pub. 1994, July 1988, pp. 63-68), which drew on a previous Memo by the USITC Chief Economist, (Suomela (1986, pp. 8-21)) that explained conceptual and practical problems in comparing prices of imported and domestic products. The eventual response by supporters of underselling who were outside the USITC was to change the Law. This gave supporters inside the USITC the necessary mandate to continue using underselling in their opinions. Thus, it appears that the change in the Law and the statement in the Conference Report served two purposes.

³² For example, see Morkre and Kruth (1989), Suomela (1993), Staiger and Wolack (1994), and Sykes (1997).

The underlying assumption appears to be that the dumped import and domestic products are in all respects identical, except for price. Aside from being new suppliers there is a puzzle about how price differences can be maintained between these suppliers and domestic suppliers for many months, or even a year or more. The customers -- who are themselves usually importing or retailing firms, not final consumers -- are expected to buy from the lowest cost source. For new suppliers, lower prices may be needed to gain acceptance in the U.S. market, in which case the lower prices are an investment, and a cost of breaking into a new market. However, for most AD cases imported and domestic products are differentiated products (particularly for manufactured goods) and there is no reason to expect that equilibrium prices of the two products should be the same. To the extent that DC firms typically sell lower quality products in the U.S. market compared to their domestic counterparts it is expected that underselling would be a normal characteristic of the market. Thus relying on underselling would tend to bias USITC decisions against DCs.

To illustrate consider the 64 cases involving China. Of these all but nine involved significant underselling. Even among some of these nine underselling played some role. For example, in Bulk Aspirin the Commission found underselling but decided that the China product and the domestic product "...had somewhat limited substitutability" because Chinese producers "...generally have not offered acceptable consistency, order lead times, and product grade offering."³³ The Commission concluded that the underselling by dumped imports was not significant at the present time because the dumped imports had "not been competing for the domestic industry's main customers." But it felt that "pervasive underselling would continue" and that the Chinese product would make inroads in the U.S. market and have "significant downward pressures on the prices for the domestic product..." The Commission determined that the domestic industry was threatened with material injury.

The importance of dumped imports in the U.S. market, both absolutely and relatively, typically is expressed in volume terms as opposed to value terms. In part this is explained by U.S. Law (and similarly by the WTO), which calls for an analysis of the effects of volume of allegedly dumped imports. But it is also related to the view that essentially dumped imports and the domestic product are the same. This leads to some severe apples and oranges situations when the quality of dumped imports is much different than that of the domestic product. And it also means that when dumped imports are inferior to their domestic counterpart -- and there is underselling -- that the magnitude of dumped imports will be overstated. In the aspirin case discussed above, the "Views of the Commission" calculated the market share of the Chinese product on a volume basis just as if the Chinese product was perfectly comparable to the domestic product.³⁴ Thus, as with underselling, if DC products are inferior to domestic products, then USITC decisions that emphasize volume effects have a bias against DCs.

Finally, cumulation refers to the practice of combining the dumped imports from two or more countries, when the products involved are close substitutes and the AD

³³ Bulk Aspirin from China (June 2000, USITC Pub 3314), p. 9.

³⁴ *Ibid*, p. 8 and note 64.

investigations are taking place at about the same time.³⁵ Since each country has its own AD case (and investigation number) this means that AD cases are combined. As explained, for example in Morkre and Kelly (1994, Appendix A), for purposes of analyzing decision-making at the USITC, the consequence of cumulation (of two or more AD cases and countries) is to create a new single and larger case.³⁶ Cumulation therefore increases the likelihood that the USITC will decide against all cumulated countries under investigation: all foreign suppliers, DCs as well as ICs, will share this prospect. However, to the extent that imports from a DC are smaller -- possibly much smaller -- than those from an IC, the DC is likely to be adversely affected to a greater degree. This assumes that the probability of an affirmative injury decision by the USITC against a foreign country is positively correlated with the magnitude of that country's exports. However, there is a qualification to this argument following implementation of the WTO.³⁷ Since 1995 AD investigations against countries whose imports are less than 3 percent of the volume of total imports of the relevant product must be terminated. However, the termination provision does not apply if combined imports several small countries (irrespective of whether they are ICs, DCs, or mixed) exceed 7 percent of volume total imports. The so-called "3 percent" and "7 percent standards" may lessen the burden of AD actions against DCs. But, unfortunately, the two standards require calculation of import shares in "volume" terms, which is not expected to be to the advantage of DCs.³⁸

IV. What Do the Data Show

We examine U.S. AD investigations initiated over the 15 year period 1990 to 2004 that resulted in new restrictions on imports. Summary results are provided in Table I. Altogether, the results cover 302 investigations and involve 45 countries. We exclude from our study all AD investigations where the U.S. did not restrict imports. This means that we may miss some possible adverse effects of AD investigations on foreign country exporters. For example, according to empirical results reported Staiger and Wolack (1994), the mere filing of AD petitions induces foreign firms to substantially curb shipments to the U.S.

However, there are two reasons for confining our attention to AD cases that resulted in import restrictions. The first is that whatever anticipatory effects AD investigations may generate such anticipations ultimately need to be grounded on actual AD orders. Otherwise AD investigations could be ignored, at least by foreign firms.³⁹ The second reason concerns data quality. By concentrating on AD cases where orders were issued we are able to exploit, as fully as possible, detailed information about dumped imports available in USITC reports. This is a definite improvement over many

³⁵ Sec. 771(7)G(i) of Title VII of the 1930 Tariff Act.

³⁶ This point was appreciated earlier by Feinberg and Hirsch (1989).

³⁷ Sec. 771(G)(24) of Title VII of the 1930 Tariff Act. Also see Article 3.3 of the WTO Anti-Dumping Agreement (Art. 6 of the GATT 1994).

³⁸ USITC (2001), p. II-41.

³⁹ This is fact appears to have been the case in the years before 1980, and particularly before 1970, according to data presented by Irwin (2005, Figures 3 and 4).

studies of AD actions that construct data for dumped imports either by aggregating detailed HTS level import series or by using broader HTS categories that encompass the relevant imports.⁴⁰

There are two types of import restrictions that can arise from AD cases: (i) AD duties and (ii) suspension agreements. Most AD cases that restrict imports end in AD orders being issued by USDOC to U.S. Customs directing the latter to collect deposits or require bonds from importers. During 1990-2004 there were only 17 suspension agreements out of the total of 302 cases where AD relief was granted to domestic industry. A suspension agreement occurs when USDOC negotiates an agreement with exporters alleged to have dumped in the U.S. Under the agreement foreign firms are required to curtail quantity of exports to the U.S. or to raise prices charged U.S. importers so as to remedy the injury to domestic industry caused by dumping. However, as noted by Moore (2005), since 1995 suspension agreements were confined to price agreements because voluntary export restraints (VERs) were banned under the WTO.

Finally, the quality of data for suspended cases is generally inferior to cases that end in AD orders. For the latter both the USDOC and USITC reach final decisions based on the collection and assembly of considerable information by their respective staffs. However, for suspension cases the investigation by one or both USDOC and USITC is often cut short. A particular concern is with antidumping margins. For eight of the 17 suspended AD cases no final AD margins were found. Each of the eight had preliminary AD margins but final margins can differ appreciably from preliminary margins.

Antidumping Margins

Table I reports two summary characteristics for AD cases where orders were issued: (i) the average AD margins imposed on foreign countries and (ii) the relative importance of dumped imports in total U.S. imports from each of the foreign countries. Countries are divided into two categories, industrial countries (ICs) and developing countries (DCs). Somewhat arbitrarily we define ICs as countries that were members of the OECD on January 1, 1999. The remaining countries comprise the developing countries group. In addition, DCs are further divided into two subgroups, countries that were NMEs (as determined by USDOC) and those that were not. According to our definition all NMEs were also DCs. There is, of course, a substantial variation across countries in each of our groupings in terms of e.g., per capita income. Even within the NME group there is a considerable difference between countries such as Russia and Uzbekistan. So while we do not want to attach too much importance to the numbers that appear for the various country categories in Table I we believe they provide some helpful perspective about the impact of U.S. antidumping actions.

The first three rows of Table I report the weighed average margin (WAM) for each country grouping. The weights used are value of dumped imports immediately prior to the issue of the AD order. Since our weighted average margins use pre-order import values as weights it avoids the downward bias problem of familiar weighted average tariff rates that use import values after the tariff has been effect for some time. Moreover,

⁴⁰ See Blonigen and Prusa (2003) for a discussion of the practice of several empirical studies.

because the calculation of WAM incorporates the importance of each case (in value of dumped imports) it is a preferable measure for average margin than the simple arithmetic average (AAR) across cases. But since the latter is easier to calculate and frequently used we also report it for comparison.⁴¹ The AARs appear in the next three rows of the table.

The WAMs show sharply contrasting trends for ICs and DCs. While average margins for ICs declined from 95.4 percent in 1990-1994 to 14.9 percent in 2000-2004 those for all DCs increased from 33.0 percent in 1990-1994 to 83.6 percent in 2000-2004. However, the extent of downward trend for the IC average margin is overstated by the very high margins for two suspended cases. These outliers involve color photographic paper from Japan and the Netherlands, which did not have final AD margins; we used preliminary AD margins for these cases. The margin for Japan was 361 percent and that for the Netherlands was 321 percent.⁴² If we exclude the suspended cases the average margin for ICs still trends downward, but less steeply, from 39.5 percent in 1990-94 to 14.9 percent in 2000-2004. Moreover, the figures for all DCs mask considerable differences between average margins for NMEs and those for all other DCs. Average margins for NMEs were over 100 percent during the 15 year period and reached a maximum of 167 percent in 1995-1999. On the other hand average margins for other DCs were one-fifth the NME levels and reached a maximum of 21.3 percent in 1995-1999.

Comparison of the above results for WAM with those of AAR shows that the arithmetic average margin is generally greater than the weighted average margin. In some instances the difference is considerable. The most extreme difference arises for the margins for all DCs in 1990-1994: the WAM is 33.0 percent while the AAR is 71.5 percent. Evidently using the AAR to measure average tariff margins can overstate, possibly substantially, the extra tax burden borne by those who ship dumped imports.

⁴¹ For example, see CBO (1998, Table B-5).

⁴² Color Negative Photo Paper and Chemical Components, USDOC case A-588-832 from Japan and USDOC Case A-421-806) from the Netherlands. Both were initiated in 1993.

Dumped Imports

The middle rows of Table I show the percent share of dumped imports in total imports.⁴³ The numerator is the sum of dumped imports from countries whose imports were restricted by AD actions within the respective five year period divided by average annual total imports from those same countries over the period. Thus, for each five year period this measure only captures the relative performance of countries that were determined to have dumped during the period. Two findings can be highlighted. The first concerns the comparison between ICs and all DCs. For ICs the share of dumped imports dropped substantially over time, from 1.06 percent in 1990-1994 to 0.16 percent in 2000-2004. However, there is relatively little change over time in the share of dumped imports for all DCs. It even increased modestly, from 1.32 percent in 1990-1994 to 1.53 percent in 2000-2004. The second finding concerns the comparison between NMEs and all DCs excluding NMEs. Dumped imports are found to be of increasing importance for NMEs, rising from 0.32 percent in 1990-1994 to 1.49 percent in 2000-2004. However, the opposite trend is found for DCs less NMEs. For them the share of dumped imports drops from 5.95 percent in 1990-1994 to 1.62 percent in 2000-2004. But overall, at the end of the period, the share of dumped imports for ICs was markedly lower than that for DCs, whether all DCs combined, NMEs alone, or DCs excluding NMEs.

Finally, and curiously, the incidence measures at the bottom of Table 1 suggest that AD actions have increased over time for ICs but decreased for DCs. Based on the number of AD actions per unit (value basis) of imports, ICs suffered twice the burden that DCs did in our third 5-year time span.⁴⁴ In 2000-2004 the number of AD cases per unit of imports was 178 for ICs but only 106 for all DCs, 83 for NMEs, and 153 for DCs excluding NMEs. Incidence measures thus appear to be a questionable guide for the burden of AD actions on countries that export to the U.S.

V. Econometric Results

The descriptive statistics presented above suggest that the way the U.S. Antidumping Law is administered is particularly harmful to Developing Countries. However, these statistics are only suggestive. They do not allow for the influence of other factors that vary across countries, factors such as the structure of imports and prices in foreign countries relative to those in the U.S. It is possible that when other factors are taken into account the relationship between dumped imports and DCs may need to be qualified. We turn to an econometric analysis to address this question.

⁴³ Details about the construction of value of dumped imports are provided in the Data Appendix.

⁴⁴ A unit of imports is \$10 million in constant 2000 dollars.

Antidumping margins⁴⁵

Since all NMEs are relatively low income countries testing for whether AD margins for NMEs are appreciably higher than those for MOEs is also relevant to the issue of whether USDOC discriminates against developing countries. Moreover, drawing on the discussion in section III the type of regression model that is appropriate to explain AD margins needs to distinguish between MOEs and NMEs because USDOC uses different methods for the two types of countries. The dependent variable is the AO margin for MOEs and the country-wide AD margin for NMEs. The range of issues considered below is substantially influenced by an important article by Blonigen (2006). But while he examines the relationship of the various USDOC practices to AD margins of individual firms our focus is on whether these practices are applied differently to MOEs and NMEs.

Before turning to the econometric analysis of AD margins it is necessary to raise a caveat. Ideally the appropriate counterfactual AD margin of a country would be its own AD margin absent these practices. If available, detailed data could have been used to review AD cases and to determine their margin before the practices were applied. As far as we know there is only one study, by Lindsey and Ikenson (2002, Table 4), that obtained and used such data drawn from a sample of 14 dumping determinations for firms. Unfortunately, such detailed data across all cases in our sample is not available to us. Instead it is necessary to compare reported margins across AD cases and examine the relationship between these margins and the various practices that apply to them. Thus our regression model only allows us to test for systematic differences between AD margins of cases with and AD margins of cases without such practices. It does not allow for inferences about the effects of practices on own margins.

In our regression model we distinguish between MOEs and NMEs in two ways. First, each group has its own intercept, shown by MOE and NME respectively. Second, each has its own estimate for the impact of the USDOC discretionary practices that apply. This is done by interacting MOE and NME with appropriate discretionary practices. The four discretionary practices are measured by indicator variables and refer to: (i) cost of production (COP), (ii) constructed value (CV), (iii) facts available (FA), and (iv) adverse facts available (AFA). The relevant discretionary practices for MOEs encompass all four practices. For NMEs the only relevant practices are FA and AFA, since COP and CV do not apply to NMEs.

Our regression model differs from models in other papers used to estimate the factors that explain AD margins, e.g., by Blonigen (2006) and Moore (2006). This is partly due to the fact that previous efforts have sought to explain individual firm margins whereas here we seek to explain country wide margins. The usual approach to estimate firm margins is to estimate a regression equation that has a constant term, a dummy variable for NME, and then dummy variables for one or more of COP, CV, FA, and AFA. However, this does not take full account of the fundamental differences in

⁴⁵ The cases covered in this subsection do not include cases that ended in suspension agreements because the ordinary investigation was typically not completed.

methods used by USDOC in finding margins for MOEs and NMEs. It also does not take account of the fact that COP and CV are relevant only to MOEs. Finally, other authors studying firm margins assign a value of 1 to each of the four indicator variables for Commerce practices if the practice is used even partially for a firm. In this study, as our baseline, we reserve this assignment to situations where all firms in a case are subject to the practice. This is done mainly because we do not know how much importance to attach to the practice when firms are treated differently.⁴⁶ For all these reasons it is therefore not unexpected that the difference between the approach we use here and the usual one also shows up in the OLS estimates.⁴⁷ Finally, the unit of observation is based on a specific investigation by USDOC; these investigations are the subjects of public notices in the Federal Register by the Agency. Each observation or case identifies a country and is assigned a year; the year is the year the case was formally initiated.

The econometric results are presented in Table 2 and distinguish between two regression model specifications. In the first three columns the dependent variable is the country margin; in the last three columns the dependent variable is the logarithm of the country margin. The results of the two specifications are broadly similar. But the logarithmic runs perform better both in terms of statistical significance of coefficients and in terms of explanatory power. We first look briefly at the results for the arithmetic runs as they are more intuitive.

Column (1) gives the basic results for the relationship between USDOC practices and the levels of margins for NME and MOE countries generally. The average margin for NME cases not affected by Commerce practices is 111.62 percent, which is appreciably higher than the corresponding average for MOEs, 23.37 percent. Using the conventional “t-test” the difference in the coefficients is significantly greater than zero (one-tail test) at the 1 percent level.⁴⁸ The results also suggest that margins are not appreciably higher in NME cases where USDOC uses FA and AFA. The estimated coefficients for NME*FA and NME*AFA, 5.80 and 20.35 respectively, are not statistically significant. However, for MOEs we find that FA does involve higher margins. The estimated coefficient of MOE*FA is 26.57 and significant (at the 5 percent level). Thus when FA is used the MOE margin on average is $23.37 + 26.57 = 49.94$ percent. But we do not find that the use of AFA in MOEs is associated with higher margins. The estimated coefficient for MOE*FA*AFA is positive, 22.17, but not significant.

⁴⁶ However, for comparison we did run regressions where assigning a 1 value to all situations where PART was the value of the USDOC practice. The results were broadly similar to our baseline.

⁴⁷ For example, the OLS estimates of COP and CV shown in column (1) of Table 2 are different from the estimates of the usual regression model that has the same variables but does not confine the effect of COP and CV to MOEs.

⁴⁸ The conventional “t-test” (e.g., D. N. Gujarati’s (1988) Basic Econometrics, p. 227) equals the difference in estimated coefficients divided by the standard error of the difference (which equals the square root of the sum of the variances of the two estimators minus two times their covariance) with $n - k$ degrees of freedom ($n =$ sample size, $k =$ number of parameters estimated). This is $(111.62 - 23.37) / \text{sqr root}(24.05 + 222.04 - 0) = 88.25 / 15.69 = 5.62$. The covariance is zero. The $df = 285 - 7 = 278$.

Column (4) gives corresponding estimates for the logarithmic runs. While the results are comparable to those of the arithmetic runs the statistical significance of the log estimates is higher. The explanatory power is considerably higher, with the adjusted R squared reaching 0.94. However, the interpretation of the estimated coefficients is different. For example, the estimated coefficients for NME and MOE, 4.23 and 2.69 respectively, are averages of the logarithms of the margins of all cases not affected by USDOC practices. Exponentiation of the coefficients for the practices (minus one) gives the percent increase in the average margin associated with the practice. For example, the estimated coefficient for MOE*FA, is 0.98, which is significant at the 1 percent level, indicates that the average (log) margin for MOE cases involving FA is 166 percent higher than for MOE cases not affected by any USDOC practices.⁴⁹ However, the estimates in column (4), as in column (1), are concerned with the general pattern of associations of USDOC practices with the division of countries into the MOE and NME groups. The picture changes somewhat when dummy variables are introduced for major supplying countries or regions, and for the influence of the WTO, which took effect in 1995.

Eleven country (or regional) dummy variables allow for the collection of unobservable influences that affect AD margins of specific countries/regions. With one minor exception we follow Blonigen (2006) in the choice of countries/regions.⁵⁰ Finally, also following Blonigen, each discretionary variable is interacted with time to determine whether its influence changes over time.

Column (5) shows that when the country/regional and WTO dummies are added to the regression equation there is an appreciable change in the estimated coefficients for NME and MOE, 3.5 and 2.94 respectively. Although NME and MOE remain significant the difference between them is no longer so.⁵¹ This is explained in part by the large positive and significant coefficients estimated for China, 0.60, and Russia/USSR, 0.82, both of which lower the influence of the general NME term. Both are NMEs throughout virtually all of our sample period.⁵² The other factor concerns the negative coefficients estimated for Korea, -0.72, and Taiwan, -0.51, which increases the influence of the general MOE term. This latter effect is diminished somewhat by the positive coefficient estimated for Japan, 0.51.

The dummy variable for WTO is designed to measure the influence of the legal changes implemented with the Uruguay Round beginning in 1995. The variable WTO is assigned value 0 for every year up to 1994 and value 1 thereafter. There were two major changes affecting AD margins. The first was an increase in the *de minimis* dumping margin from 0.5 to 2.0 percent. For an AD duty to be applied to a MOE country from 1995 its calculated margin needed to be at least 2 percent. The effect of this change alone would be expected to increase the country margin since some low margin companies would no longer be included in the averaging process that produces the AO margin.

⁴⁹ This is found by raising the mathematical constant “e” to the power 0.98.

⁵⁰ The only difference is that we keep the former Soviet republics together with Russia in the USSR/Russia group as opposed to putting them in the residual group (rest of world) as Blonigen does.

⁵¹ The t-statistic for the difference between NME and MOE is $(3.5-2.94)/\text{sq root}(.061+.158-.042) = .56/.42 = 1.33$.

⁵² Russia graduated to market economy status effective April 1, 2002. 69 F.R. 59202.

Perhaps more important, the second change brought by WTO was to exclude the AD margins of companies based on FA or AFA in the calculation of the AO rate. This would be expected to lower the country margin because margins of firms with FA or AFA tend to be high. Both of these adjustments apply only to MOEs. No change was made in the way the country-wide rate was found for NMEs. To detect this differential effect on MOEs and NMEs we use separate WTO dummies for each.

The estimated coefficient for MOE*WTO is negative and significant, which supports the notion that removing FA margins from AO rates would tend to lower them. As expected, the estimated coefficient for NME*WTO is not significant.

The final issue considered is how Commerce practices applied to MOE and NME margins have evolved over time. For this purpose five additional indicator variables are added to the regression equations. They are formed by interacting each of the discretionary variables discussed above with time. For example, MOE*CV*Time, where Time is a simple linear trend setting 1990 equal to 1, 1992 = 2 and continuing in this fashion to year 2004. The results are given in column (6). They show that none of the five practices interacted with time are significant. This suggests that there is no appreciable relationship between MOE and NME country margins and USDOC practices over time

Our findings agree in part and differ in part from those reported earlier by Blonigen (2006, tables 3 and 4). Both papers find that FA is associated with higher margins; however in our paper this only applies to MOEs. We differ substantially about the role of discretionary practices over time. Blonigen finds that AFA is positively associated with AD margins over time; we do not. One of the major reasons for this difference is that Blonigen studies margins assigned to individual firms whereas our results are for weighted average margins of firms (in MOEs) or the country-wide rate for NMEs. Thus the likely explanation for our difference with Blonigen is that he is including in his sample the margins of firms in MOEs that receive AFA while the AO rate we use would generally not include margins based on AFA from the beginning of the WTO in 1995.⁵³

In sum we find that country margins for NMEs in general are substantially higher than those for MOEs. However, this difference disappears when allowance is made for country/regional effects. In particular, China and the Russia/USSR region are found to account for a substantial portion of the relatively high country-wide NME margins. After their influence is considered what is left of the average NME rate is not significantly different from the average margin for MOEs. Regarding the four USDOC discretionary practices only one requires mention. FA is positively related to country margins, but only for MOEs. Finally, our estimates are consistent with the argument that discretionary practices have not evolved in any systematic fashion over time.

⁵³ The exceptions refer to cases where USDOC only had margins based on FA or AFA. However, from 1995 there were still 33 cases out of 114 where individual firm margins based on FA were used in calculating the AO margin..

Dumped Imports

To assess whether the administration of U.S. AD law discriminates against low income countries generally we estimate a regression equation that explains a country's relative dumped imports by its per capita income while controlling for other possible factors. The dependent variable is a country's ratio of dumped imports to total imports on an annual basis, which adjusts for substantial differences in magnitude of imports across countries. If the AD law imposes a particularly severe burden on DCs we expect the coefficient of the income variable to be negative. To allow for possible nonlinearities in the relationship we also include as an independent variable income squared. Country/region dummy variables are included, the same ones used in the previous section. Finally, the unit of observation is on a country-year basis. When a country has several AD cases in a particular year they are aggregated to form a single observation for the year.

Column (1) in Table 3 gives the results when the only explanatory variables are the two income variables. The principal finding is that the estimated coefficient for income is negative. The estimated coefficient for income (-7.06) is negative and significant (at the 5 percent level). This suggests that the application of U.S. AD law imposes a particular hardship on poor countries. While the overall equation is highly significant at the 1 percent level (F-test equals 7.3) the explanatory power of the equation is low (adjusted R squared equals 0.06). When country dummy variables are added as explanatory variables, column (2), we find that income becomes more important in explaining relative dumped imports: the estimated coefficient, -13.10, is highly significant. Compared to the basic run in column (1) the estimated equation here remains highly significant (F = 8.67) but the explanatory power improves considerably: the adjusted R squared is 0.32. However, the coefficient of income squared is positive and also highly significant. Thus the relationship between dumped imports and income is nonlinear, specifically it is quadratic. For low income countries as a group, those with the lowest levels of income suffer most from the influence of U.S. antidumping actions. There is also a comparable implication for high income countries as a group: for countries with the highest incomes in this group U.S. antidumping also has a more significant effect on their export activity. Based on our sample data the income level that divides countries into the two groups, i.e., the income level where the dumped imports to total imports ratio is lowest is \$18,200 per capita. Among the countries in our dataset the ones whose incomes were nearest this figure in 2000 are Portugal (\$18,300) and New Zealand (\$19,600).

The sensitivity of the estimated relationship between dumped imports and income was examined by introducing two types of independent variables. It is possible that the inverse relationship between income and dumped imports for countries with low levels of income masks other factors that, when considered explicitly, override the effect of income. We consider two such factors. One concerns the diverse structure of imports across countries. Another looks to price-cost type influences. In addition, we also consider the extent to which the results are influenced the AD experiences of particular countries, notably a major low income country – China – and a major high income country – Japan. These two countries had the most U.S. AD actions against them in our sample period.

One measure of import structure particularly well suited to U.S. AD is the ratio of steel imports to total imports.⁵⁴ Historically, the U.S. steel industry has accounted for a high proportion of U.S. antidumping investigations.⁵⁵ Therefore countries whose shipments to the U.S. are comprised heavily of steel products are likely to be more prone to AD actions. While the U.S. imports steel from many high income countries, such as Canada and Japan, it also imports steel from lower income countries, including China and Russia. Thus we expect that the variable STEEL, which is the ratio of steel imports to total imports, would be positively related to relative dumped imports.⁵⁶

Two types of variables are used to capture price-cost influences. The first is based on the bilateral real exchange rate between the U.S. and the source country.⁵⁷ An increase in the RER increases the real value of the U.S. dollar: U.S. goods become more expensive than foreign goods and as a result U.S imports of such goods increase. The increase in imports injures some domestic industries, which leads to the filing of AD petitions. The bilateral RER has been included in empirical studies of AD. For example, both Feinberg (1989), and Knetter and Prusa (2003) use the RER to explain the number of AD cases filed. They find that RER is positively correlated with the number of cases. We extend this line of inquiry to consider whether RER influences dumped imports. Moreover, we also use recent changes in each country's RER as opposed to the level of its RER on grounds that the shock of recent changes in RER, given the level of RER, will drive efforts of domestic producers to seek protection by resorting to attempts to obtain AD protection. The expectation is that increases in RER just before AD cases are filed will be positively related to dumped imports.

The second price-cost variable is based on the relative nominal tariff rate (RT) for the product under investigation. The relationship between average tariff rates and AD actions was examined in a report to APEC by the APEC Business Advisory Council (2002) in a study conducted by Spinanger and more recently and generally in Vandebussche and Zanardi (2008). Spinanger, for example, found that over the period 1991 to 2000 there was an inverse relationship between average tariff rates on all imports and number of AD actions brought. This suggests that domestic producers seek to offset tariff rate declines with AD protection. In this study we focus on relative tariff rates for each country and include in the tariff rate for the imported product any preferential treatment the country receives, such as changes in GSP treatment that apply to some

⁵⁴ Other dimensions of import structure may also be important to explaining DC dumped imports. For example, the relative composition of primary products and agricultural products in total imports may be significant for DCs. However, this is an issue that remains to be explored.

⁵⁵ Nearly half of the cases in our sample, 133 of 285, involve steel (SIC 3312, 3315, 3316, and 3317). . Steel comprises basic steel products (primarily carbon and stainless), which includes pipes and tubes, nails, and wire rope. The correspondence with NAICS (after 1997) is in <http://www.census.gov/epcd/naics/naics3dx.htm>

⁵⁶ The variable STEEL is the ratio of primary metal imports to total merchandise imports. Steel products account for approximately one-third of imports of primary metal products. Data for primary metals was for SIC industry 33 from 1990 to 1996 and for NAIC industry 331 from 1997 to 2004.

⁵⁷ The RER is the nominal exchange rate adjusted for rates of inflation in the two countries. It is defined as the nominal exchange rate (number of units of foreign currency per U.S. dollar) times the ratio of the WPI in the U.S. divided by the WPI of the foreign country.

DCs.⁵⁸ RT is defined as the ratio of the one plus the percent tariff rate on the imported product under investigation divided by one plus the average tariff rate for all imports. A domestic industry facing competition from imports is expected to seek AD duties to offset a decline in tariff rates on rivalrous imports. Such behavior implies an inverse relationship between the change in the RT in the recent past and dumped imports.

The results are given in columns (3) through (6) of Table 3. Perhaps the most notable finding is that the income variables are little affected by either import structure or price-cost variables. The coefficient for income varies between -13.07 and -12.41; the income squared variable varies between 0.36 and 0.39. Both variables are highly significant for all runs. Not surprisingly STEEL has a strong positive influence on dumped imports and is highly significant. For the price-cost variables only the change in the relative tariff rate plays an important role in explaining dumped imports. The change in the real exchange rate is not significant. Both PCRT3, the percent change in relative tariff rate two years before the filing of the AD case and the year of filing, and PCRT5, the percent change in relative tariff rate four years before filing and the year of filing, are both highly significant.⁵⁹ But contrary to expectation, the estimated coefficients are positive. This suggests that domestic producers seeking AD duties simultaneously seek higher ordinary tariff rates (or resist declines in such tariff rates) when they are injured.⁶⁰ This finding aside, the principal implications of the results in Table 3 is reasonably clear.⁶¹

Overall, our econometric estimates indicate that for low income countries there is an inverse relationship between country income and dumped imports. However, for high income countries we find a positive relationship between country income and dumped imports. The influence of country income on dumped imports is found to be nonlinear. This finding is also robust.⁶² When other possible determinants of dumped imports, notably import structure and price-cost variables, are explicitly considered there is virtually no change in the estimated coefficients for the income variables.

⁵⁸ When necessary the tariff rates for imported products under investigation are converted from specific duties to their *ad valorem* equivalents. In addition, when there are several products in an investigation (and different tariff rates for these products) a weighted average tariff rate is calculated using as weights customs value of imports in the year of initiation. Finally, for countries that have several cases in a given year a weighted average tariff rate is calculated across cases in the same manner.

⁵⁹ The percent change in the relative tariff rate PCRT3 is $100 \cdot [R1 - R3] / (R3)$, where R1 is $(100 + TD1) / (100 + TM1)$, TD1 is the *ad valorem* tariff rate in percent on the dumped imports in an investigation and TM1 is the corresponding tariff rate for all imports from the country investigated, “1” indicates year of initiation of AD investigation and “3” indicates two years prior to year of initiation.

⁶⁰ However, MFN nominal tariff rates under the WTO/GATT may also be scheduled to decline over time according the agreements reached in the Uruguay Round or other multilateral trade rounds. Then there is no discretion to raise tariffs rates, except in the event that the tariff rate in force is less than the bound rate. However, even for some bound rates there can be room for officials to increase rates. One is for the USTR to remove GSP or preferential treatment granted to certain producers in developing countries

⁶¹ We also estimated the dumped import equation using levels of RER and relative tariff rates instead of changes in these variables. However, the level variables, both current and lagged, were not significant.

⁶² In addition to the several regression specifications shown in Table 3 we also considered whether the absence of either China or Japan would affect the results. Specifically, we deleted from the full sample all AD cases involving China and estimated the equations. The same was done for cases involving Japan. The regression results for both reduced samples were generally the same as those for the full sample.

VI. Conclusion

We have examined two ways in which foreign countries can be harmed by U.S. Antidumping actions. The first is the AD duties imposed against foreign producers. The second is the relative values of imports that are penalized. With respect to AD duties we compared country-wide AD margins for Market Oriented Economies and Nonmarket Economies. This approach was used because Commerce uses considerably different methods to calculate margins for these two groups of countries. Not surprisingly, the NME margins are considerably higher than those of MOEs. But once allowance is made for the effects of particular countries or regions, the significance of the difference in AD margins between the two groups of countries vanishes. What stands out is that the AD margins of two NMEs are very high: those for China and for the Russia plus the former Soviet republics. The margins for Russia and the former Soviet republics are also significant across all regression specifications.

With respect to relative dumped imports – the ratio of dumped imports to total imports – we find that relatively poor countries (in terms of per capita GDP) are severely harmed by U.S. AD actions. We also find that the relationship between relative dumped imports and income is nonlinear. Thus the adverse effect of AD actions diminishes as income increases. But the very poorest countries are the ones that bear the heaviest burden of U.S. AD actions.

Our findings do not suggest that the U.S. Government is consciously or deliberately using the AD Law to discriminate against NMEs or low income countries. In one sense this is readily apparent as AD investigations are predominantly the result of private actions by individual U.S. firms filing AD petitions. Although the U.S. Government has the legal right to self-initiate AD cases it rarely does so. Further, it is not the case that the U.S. Government agencies that administer the AD law – the USITC and the USDOC – deliberately and consciously attempt to administer the law in such a manner that NMEs or low income countries are discriminated against. Instead, the discrimination we find against NMEs and low income countries is a consequence of the procedures used by the USITC and the USDOC to administer the AD law. It appears to be another instance of the law of unintended consequences.

Glossary of abbreviations

AD	Antidumping
AO	“All others” rate reported for MOE’s
AFA	Adverse Facts Available
CGE	Computable General Equilibrium
COP	Cost of Production
CV	Constructed Value
FA	Facts Available
GATT	General Agreement on Tariffs and Trade
GSP	Generalized System of Preference
HTS	Harmonized Tariff Schedule
IC	Industrialized countries
LTFV	Less than fair value
MFN	Most Favored Nation
MOE	Market-Oriented Economies
NME	Non market Economies
NV	Normal value
PD	Price discrimination
POI	Period of investigation
PPP	Purchasing Power Parity
RER	Real Exchange Rate
UNCTAD	United Nations Conference on Trade and Development
USDOC	United States Department of Commerce
USITC	United States International Trade Commission
VER	Voluntary Export Restraints
WTO	World Trade Organization

References

- APEC Business Advisory Council (2002), Sharing Development to Reinforce Global Security: Report to the APEC. Asia-Pacific Economic Cooperation.
- Baldwin, R.E. and M.O. Moore (1991), "Political Aspects of the Administration of the Trade Remedy Laws," in R. Boltuck and R. Litan, pp. 253-80.
- Bandari, J.S. and A.O. Sykes (eds.) (1997). Economic Dimensions in International Law, Cambridge Univ. Press.
- Bhagwati, J.D. (1988), Protectionism, MIT Press.
- Bhala, R. (1995), "Rethinking Antidumping Law," The George Washington Journal of International Law and Economics, Vol. 29, No. 1, pp. 1-144.
- Bhala, R. and D.A. Gantz (2007), "WTO Case Review 2006," Arizona J. of International & Comparative Law, Vol. 24, No. 2, pp. 299-387.
- Blonigen, B.A. (2006), "Evolving Discretionary Practices of U.S. Antidumping Activity," Canadian J. of Economics, Vol. 39 (Aug), pp. 874-900.
- Blonigen, B.A. and T.J. Prusa (2003), "Antidumping" in E.K. Choi and J Harrigan (eds.), Handbook of International Trade, Oxford.
- Boltuck, R. and R. Litan, eds.(1991), Down in the Dumps, Brookings.
- Bown, C. (2007), "Global Antidumping Database, Version 3.0, June 2007," Brandeis Univ. Working Paper, Boston.
- Bown, C., B. Hoekman, and C. Ozden (2003), "The Pattern of US Antidumping: The Path from Initial Filing to WTO Dispute Settlement," forthcoming in World Trade Review.
- Carlton, D.W. and R.C. Picker (2007), "Antitrust and Regulation," NBER Working Paper 12902.
- Cass, R.A. and M.S. Knoll (1997), "The Economics of 'Injury' in Antidumping and Countervailing Duty Cases: A Reply to Professor Sykes," in Bhandari and Sykes (eds.) pp. 126-165.
- Cass, R.A. and S.J. Narkin (1991), "Antidumping Duty and Countervailing Duty Law: The United States and the GATT," in Boltuck and Litan, eds., pp. 200-38.
- Clark, D.P. and D. Bruce (2006), "Who Bears the Burden of U.S. Nontariff Measures?" Contemporary Economic Policy, Vol. 24, No. 2 (April), pp. 274-286.

Clark, D.P. (1998), Are Poorer Countries the Targets of US Protectionist Actions?, Economic Development and Cultural Change, Vol. 47, pp. 193-208.

Congressional Budget Office [CBO](1998), Antidumping Actions in the United States and Around the World: An Analysis of International Data, CBO.

Durling J.P. and M. McCullough (2003), "Teaching Old Laws new Tricks: The legal Obligation of Non-Attribution and the Need for Economic Rigor in Injury Analysis of Trade Policy and Institutions," in Handbook of International Trade Volume II: Economic and Legal Analyses of Trade Policy and Institutions, edited by E.K. Choi and J.C. Hartigan. Blackwell.

Feinberg, R.M. (1989), "Exchange Rates and 'Unfair Trade'," Review of Economics and Statistics, Vol. 71, No. 4 (Nov), pp. 704-707.

Feinberg, R.M. and B.T. Hirsch (1989), "Industry Rent Seeking and the Filing of 'Unfair Trade' Complaints", International J. Of Industrial Organization, Vol. 7, p. 325-340.

Finger, J. M., ed. (1993), Antidumping: How it works and who gets hurt, U. of Michigan Press.

Finger, J. M. (1981), "The Industry-Country Incidence of "Less than Fair Value" Cases in US Import Trade," Quarterly Review of Economics and Business, Vol. 21, No. 2 (Summer), pp. 260-79.

Finger, J.M. (2002), "Safeguards," in B. Hoekman, A. Mattoo, and P. English (eds.), Development, Trade, and the WTO, A Handbook, World Bank, pp. 195-205.

Finger, J.M. and T. Murray (1993), Antidumping and Countervailing Duty Enforcement in the United States, in Finger (ed.), Antidumping: How It Works and Who Gets Hurt, U. of Michigan Press, pp. 241-254.

Gallaway, M.P., B.A. Blonigen, and J.E. Flynn (1999), Welfare Costs of the U.S. Antidumping and Countervailing Duty Laws, J. of International Economics, Vol. 49, pp. 211-244.

Irwin, D.A. (2005), "The Rise of US Anti-Dumping Activity in Historical Perspective," The World Economy, Vol. 28, No. 5 (May), pp. 651-668.

Kelly, K.H. and M.E. Morkre (2002), Quantifying Causes of Injury to U.S. Industries Competing with Unfairly Traded Imports: 1989 to 1994. Bureau of Economics, FTC.

Kelly, K.H. and M.E. Morkre (2006), "One Lump or Two: Unitary Versus Bifurcated Measures of Injury at the USITC," Economic Inquiry, Vol. 44, No. 4, pp. 740-752.

Kennedy, P. (2003), Econometrics, 5th ed. MIT.

- Kim, J.B. (2002), "Fair Price Comparisons in the WTO Anti-Dumping Agreement – Recent WTO Panel Decisions against 'Zeroing' Method," J. of World Trade, Vol. 22, No. 1, pp. 39-56.
- Knetter, M.M. and T.J. Prusa (2003), "Macroeconomic Factors and Antidumping Filings: Evidence from Four Countries," J. of International Economics, Vol. 61, No. 1, pp. 1-18.
- Krueger, A. (1999), "The Developing Countries and Next Round of Multilateral Trade Negotiations," World Economy, Vol. 22, pp. 909-932.
- Kufuor, K.O. (1998), "The Developing Countries and the Shaping of GATT/WTO Antidumping Law," J. of World Trade, Vol. 32, No. 6, pp. 167-196.
- Lawrence, R.Z. (ed.) (1998), Brookings Trade Forum, 1998, Brookings.
- Liebhafsky, H.H. (1955), "A Curious Case of Neglect: Marshall's Industry and Trade," Canadian J. of Economics and Political Science, Vol. 21, No. 3, (Aug), pp. 339-353.
- Lindsey, B. and D. Ikenson (2002), "Antidumping 101: The Devilish Details of 'Unfair Trade' Law," Trade Policy Bulletin No. 20, Cato Institute.
- Mill, J.S. (1976, 1848), Principles of Political Economy, Augustus M. Kelly.
- Moore, M.O. (2005), "VERs and Price Undertakings under the WTO," Review of International Economics, Vol. 13, No. 2 (May), pp 298-310.
- Moore, M. O. (2006), "U.S. 'Facts Available' Antidumping Decisions: An Empirical Analysis," typescript, George Washington Univ.
- Morkre, M.E. and K.E. Kelly (1994), Effects of Unfair Imports on Domestic Industries: U.S. Antidumping and Countervailing Duty Cases: 1980 to 1988. Staff Report to the Federal Trade Commission.
- Morkre, M.E. and H. E. Kruth (1989), "Determining whether Dumped or Subsidized Imports Injury Domestic Industries," Contemporary Policy Issues, Vol. 7, No. 3, pp.78-95.
- Murphy, K.M., A. Shleifer, and R.W. Vishny (1993), "Why is Rent-Seeking So Costly to Growth?" American Economic Review, vol. 83, No. 2 (May), pp. 409-414.
- Schumpeter, J. (1928), "The Instability of Capitalism," Economic Journal, Vol. 38, No. 151 (Sept), pp. 361-386.
- Shin, H.J. (1998), "Possible Instances of Predatory Pricing in Recent U.S. Antidumping Cases," in Lawrence (1998), pp. 81-97.

Staiger, R.W. and F.A. Wolak (1994), “Measuring Industry-Specific Protection: Antidumping in the United States,” Brookings Papers on Economic Activity, (Microeconomics), pp. 51-103.

Stiglitz, J.E. (2002), Globalization and its Discontent, Norton.

Suits, D.B. (1977), “Measuring Tax Progressivity,” American Economic Review, Vol. 67, pp. 747-753.

Suomela, J.W. (1993), Free Trade Versus Fair Trade: The Making of American Trade Policy in a Political Environment, Institute for European Studies, Turku School of Economics, Pub. 7/93, Finland.

_____ (1986), “Title VII, Lost Sales, Underselling, and Causation and Injury,” Memorandum from the Director, Office of Economics to Vice Chairman, EC-J-010, January 7, 1986, USITC.

Sykes, A. (1997), “The Economics of “Injury” in Antidumping and Countervailing Duty Cases,” in Bhandari and Sykes (eds.), Economic Dimensions in International Law, Cambridge Univ. Press, pp. 83-125.

United Nations Conference on Trade and Development, UNCTAD (2000), A Impact of Anti-Dumping and Countervailing Duty Actions, Background note by the UNCTAD Secretariat, TD/B/COM.I/EM.14/2, Geneva.

U.S. Congress (1994), Uruguay Round Trade Agreements, vol. 1, 103rd Cong, 2d Sess., House Doc 103-316, vol. 1, USGPO.

U.S. Congress, House of Representatives [US Congress] (1988), Conference Report, Omnibus Trade and Competitiveness Act of 1988, 100th Cong., 2d Sess., Report 100-576, USGPO.

U.S. Dept. of Commerce, [USDOC] (1997), Antidumping Manual, Import Administration, International Trade Administration, USDOC. (A self-extracting file is available online.)

U.S. Dept. of Commerce, [USDOC] (1991), Antidumping Manual, Import Administration, International Trade Administration, USDOC.

U.S. Govt. Accounting Office [USGAO] (2006), U.S.-China Trade, Eliminating Nonmarket Economy Methodology Would Lower Antidumping Duties for Some Chinese Companies, USGAO.

U.S. International Trade Commission [USITC] (2001)., Antidumping and Countervailing Duty Handbook, 9th ed.

U.S. Govt. (1994) [SAA], Uruguay Round Trade Agreements: Texts of Agreements, Implementing Bill, Statement of Administrative Action, and Required Supporting Statements, H.R. Doc. 103-316, 103d Cong., 2d Sess.

Vandenbussche, H. and M. Zanardi (2008), “The Proliferation of Antidumping Laws,” Economic Policy Vol. 23 No. 53, pp. 93-138.

Data Appendix

For this study a unique data set was created drawing primarily on public information available in published reports by the USITC and the USDOC.

Antidumping (AD) cases are assigned to the date (year) the investigation was formally initiated by the Department of Commerce (USDOC) as opposed to when the petition was filed by U.S. companies. This is because the Law that applies to an AD investigation is the one in force when the case was formally initiated. However, the year of initiation and the year of filing are usually the same. The only difference is for year end filings. USDOC may wait 20 days after filing to initiate an investigation.

A. Measurement Issues for Dumped Imports

Dumped imports are valued on a landed duty paid basis. This is the valuation basis used by the USITC in its investigations and their data, when publicly available, is use here. The advantage of using USITC data on dumped imports is that the range of products covered coincides exactly with the imports that are said to be dumped. USITC data on dumped imports were available for 143 of the 295 cases covered. For the other cases the value of dumped imports was constructed based on the most disaggregated import trade designation cited by Commerce for the case. Typically this was 8 or 10 digit HTS based import data. The import data was taken from the USITC Dataweb.

Dumped imports is used in three ways: (1) in the graph of cumulative dumped imports against cumulative total imports, (2) to calculate weighted average dumping margins, and (3) as the dependent variable in certain regression equation runs.

There are two general issues about the measurement of dumped imports, or value of dumped imports.

One issue is dating, which concerns (a) what year the dumped imports data actually occurred (which is indicated by AData Year@ on the spreadsheet) and (b) what year they assigned to (which may be different that the year in (a)).

A second issue is how to deflate value of dumped imports.

Dating. With respect to part (a) of the dating issue, the general objective is that for each AD investigation Avalue of dumped imports@ is the value that reflects what the exporting country is reasonable able to achieve in shipments of the respective products to the U.S.

To measure this we generally use value of dumped imports for the last complete year in the period of investigation (POI) used by the USITC staff for their AD investigation. Generally the USITC POI is three complete years and a partial year to date.

The reason for choosing the value for this year is that dumped imports can fall substantially after the investigation is initiated. Foreign exporters expect to be hit with a U.S. AD duty so shipments to the U.S. will become less profitable. Values for earlier years also have problems. For some countries dumped import value can increase substantially in the years immediately prior to the year the investigation is initiated. Indeed, this increase may be a major reason why domestic firms file a petition to initiate the AD investigation.

With respect to part (b) of the dating issue, the objective is to get a sense of the magnitude of dumped imports at the time the AD investigation is initiated. For the vast majority of investigations this is reasonably reflected by the value of annual imports at approximately the time of the initiation of the investigation. [The principal exception concerns so-called AThreat@ cases, but they are rare (where the USITC voted affirmatively on grounds that dumped imports were a threat of material injury).]

Fortunately, the last year of the POI often turns out to be the year the AD investigation was initiated. My review of the investigations in our spreadsheet finds that this is the case for 207 of the 302 investigations.

For most of the other investigations the data year was one year before the year initiated. However, for a few investigations there was an even wider gap between the two years e.g., owing to lack of data (from the USITC) or from very volatile annual imports (in which case an average over two or three years was used). Regardless of reason whenever the data year differs from the year initiated, for analytic purposes we need to treat the reported value of imports as occurring in the Ayear initiated@. The justification for this is we do not have the best or most appropriate observation for value of imports in the year the investigation was initiated. The best available alternative is to take the value of import data we have even though it was actually reported for another year.

Deflating. Since we are comparing various investigations over time it is necessary to deflate value of dumped imports by a suitable price index to adjust for inflation. We use the GDP implicit price deflator for this purpose.

If the Adata year@ for value of dumped imports is the same as Ayear initiated@, then value of imports is deflated by the GDP deflator for that year. The resulting real value of dumped imports is the appropriate entry for Ayear initiated@.

If the Adata year@ for value of dumped imports is different from Ayear initiated@, then value of imports is appropriately deflated by the GDP deflator for that different year. The resulting real value of dumped imports is assigned as the entry for Ayear initiated@ as the best available alternative for real value of imports for Ayear initiated@.

Uses of Deflated Value of Dumped Imports. Real value of dumped imports as discussed above is used for all three purposes.

B. Measurement Issues in Country-wide Antidumping Margin

As preliminary matters, note that the country AD margins used in this study are based on the margins found by Commerce and used in calculating the country rate. This means that AO rates for MOEs are not based on the margins of firms that were found to be *de minimis* and, from 1995, also may not be based on the rates based entirely on FA.⁶³ The country rates are also net of export subsidies and incorporate adjustments to margins made after the AD order was issued. Export subsidies are the concern of the Countervailing Duty Law and involve different measurement issues. Over the period of this study they are also relatively rare. There were 61 investigations where AD margins were revised after the order was issued. Of these 52 were revised within seven months, all but four involving “ministerial errors,” apparently arithmetic mistakes. The other four involved revisions resulting from decisions by the reviewing courts. Actions by the reviewing courts were also involved in all but one of the nine cases that took more than seven months to resolve.

There are two issues in describing country-wide AD margins. The first issue concerns Facts Available (FA), which applies to both MOEs and NMEs. The second concerns constructed value (CV) and cost of production (COP), which applies only to MOEs.

Facts Available (FA)/Adverse Facts Available (AFA)

Commerce uses two levels of FA as explained in the 1989 decision on antifriction bearings.⁶⁴ The difference between them is based on the degree of co-operation USDOC received from foreign firms. If foreign firms cooperate partially, then ordinary facts available (FA) is applied. If foreign firms do not cooperate at all, then adverse facts available (AFA) is used. For ordinary FA, USDOC usually obtains an AD margin by relying on the average of the margins from the petition or an average of the margins calculated for firms. For adverse FA, USDOC usually obtains a margin based on the higher of the highest margin from the petition or the highest margin found for an individual firm.

The AO margin for MOEs is generally a weighted average of AD margins of certain foreign firms investigated by USDOC. Before 1995 these firms were the ones that were investigated firms except those whose margins were *de minimis* (less than 0.5 percent).⁶⁵ Beginning in 1995, the average covered all investigated firms except those with *de minimis* margins (now less than 2.0 percent) and those whose margins were based wholly on Facts Available.⁶⁶ However, there are exceptions. In cases where there were a limited number of firms and all of them received FA the AO rate was also based on FA.

⁶³ The exception is where the only margins available are FA or AFA margins.

⁶⁴ 54 Fed. Reg. 19033 (Antifriction Bearings from Germany).

⁶⁵ U.S. Dept of Commerce (1992), Antidumping Manual, chap. 6.

⁶⁶ U.S. Dept. of Commerce (1997), Antidumping Manual, chap. 6, p. 10.

The country-wide margin for NMEs is based on the factors of production methodology and the appropriate assignment for FA in these cases depends on the information used to calculate that margin.

Three labels are used to describe the role of FA for the country-wide margins. For MOEs, FA or AFA are set equal to “ALL” (“NONE”) if the margins of all (none) of the individual firms involved the AO rate are based on FA or AFA. If the margins of some, but not all, of the individual firms are based on FA or AFA, then FA or AFA is set equal to “PART”. For NMEs, FA or AFA are at one extreme or the other, either “ALL” or “NONE”. Two cases have qualifications, where USDOC stated that it was using partial facts available.⁶⁷ This concerned certain data relied on for portions of the overall calculation of the country-wide rate (e.g., for particular inputs). But since the method used by USDOC to find the rate was not affected we assigned “NONE” to FA or AFA for the cases.

Constructed Value (CV)/Cost of Production (COP)

For cases involving firms in MOEs whose AD margins are used in the AO rate, we distinguish between (i) situations where USDOC bases NV entirely on CV and (ii) situations where calculation of the AD margin is affected by the results of a “sales below cost” (SBC) investigation. The former are indicated by CV, the latter by COP. The importance of CV and COP in each case is indicated in same manner as that described above for FA and AFA. CV (or COP) is set equal to “ALL”/“NONE”/“PART” when all/none/some of the margins of the individual firms involved the AO rate are based on CV (or COP).

AFA/FA and CV/COP

For some cases the AO margin will be based either on AFA/FA or on CV/COP. This outcome is more likely when AO is based on the AD margin for only one firm. But even when there is one firm its margin may involve both AFA/FA and CV/COP because that firm has several models.

For example, in the 1991 case of pipe fittings from Thailand (case A-549-807) the AO margin was a weighted average of the margins of two companies, Thai Benkan and TTU. The margin for the former was based on AFA since it did not cooperate. The margin for the latter was found from an examination of several models of pipe fittings. The home market was not viable and U.S. sales were compared with sales to a third country, Australia. For one model of pipe fittings there was no information and FA was applied. For some other models, Commerce discarded some transactions because they were below COP. Finally, for the remaining models, Commerce used CV because too

⁶⁷ 66 Fed. Reg. 50399 (Steel Products from Kazakhstan) and 69 Fed. Reg. 34132 (Tetrahydrofurfuryl Alcohol from China).

few sales were above COP. In sum, for AO margin for this case has the label “PART” given to CV, COP, as well as to AFA and FA.

Another reason that the AO margin will be based on both AFA/FA and CV/COP is when key information needed by Commerce is obtained from AFA/FA but the margin calculated by Commerce uses CV/COP.

For example, in the 2001 case of hard red spring wheat from Canada (case A-122-847) there was only one exporter, the Canadian Wheat Board. But USDOC sought cost information from 27 farmers. One farmer refused to cooperate and was assigned a cost based on AFA. Two other farmers did not comply with USDOC requests for information but had extenuating circumstances; they were assigned a cost based on FA. The comparison of U.S. prices with COP led to the rejection of some transactions. There was no report that CV was resorted to. Overall, the AO margin for this case has “PART” given to AFA, FA, and COP.

Figure 1: Dumped Imports 1990-1994

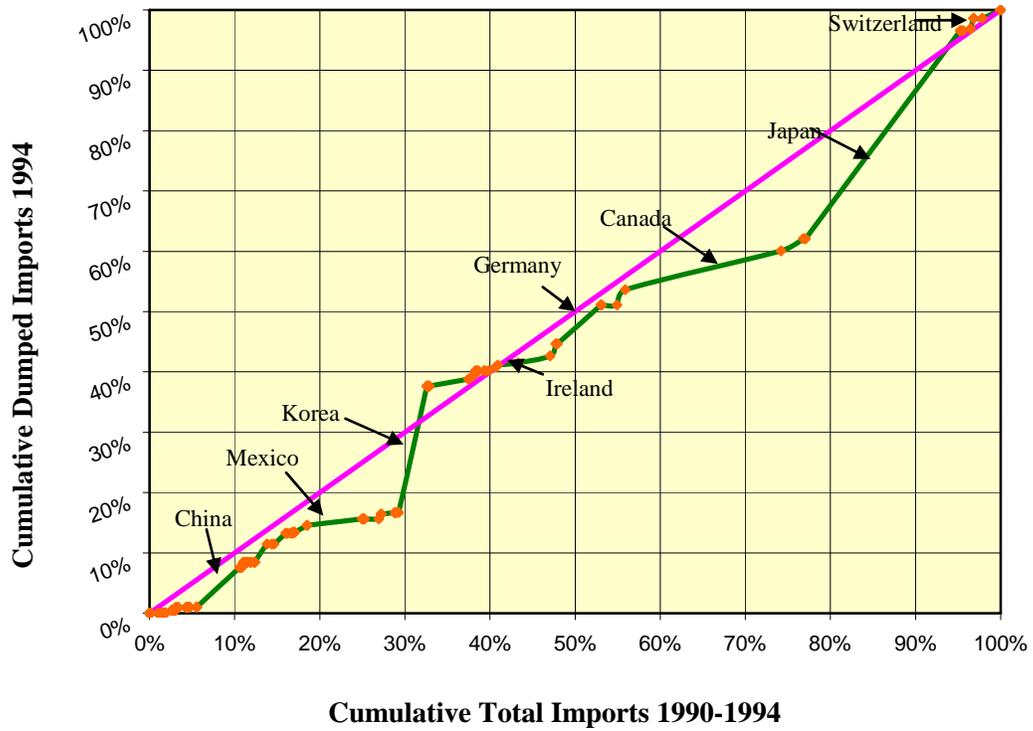


Figure 2: Dumped Imports 1995-1999

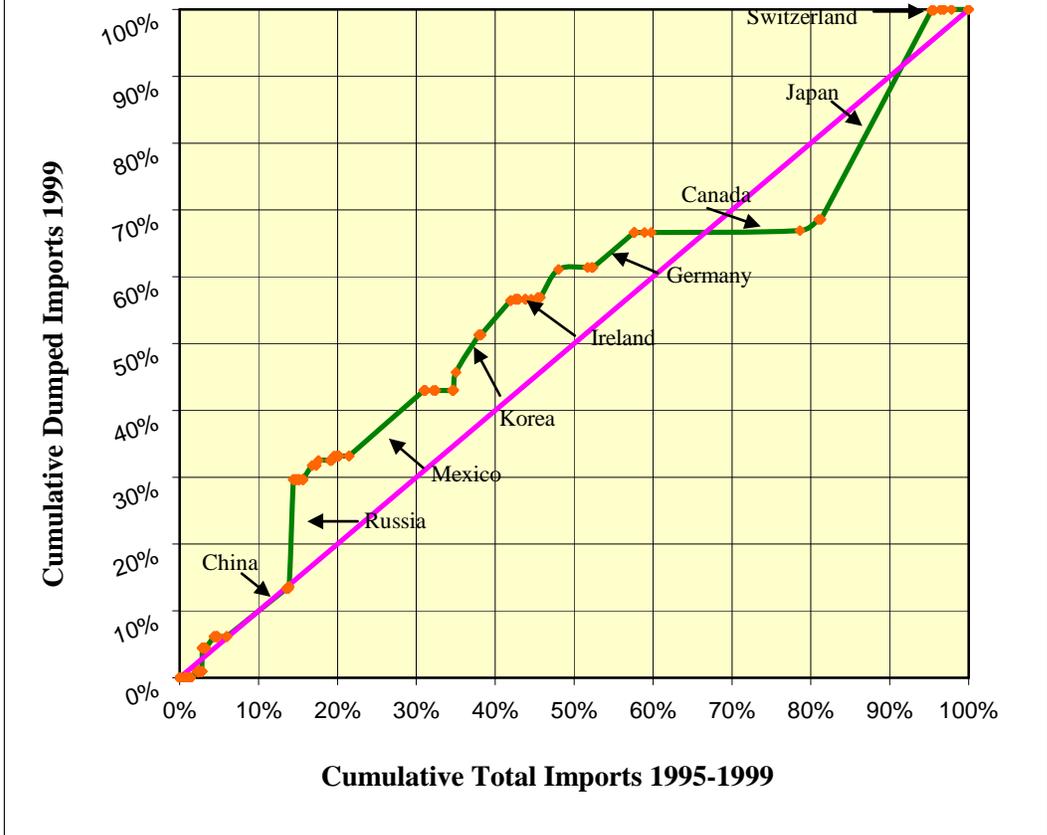


Figure 3: Dumped Imports 2000-2004

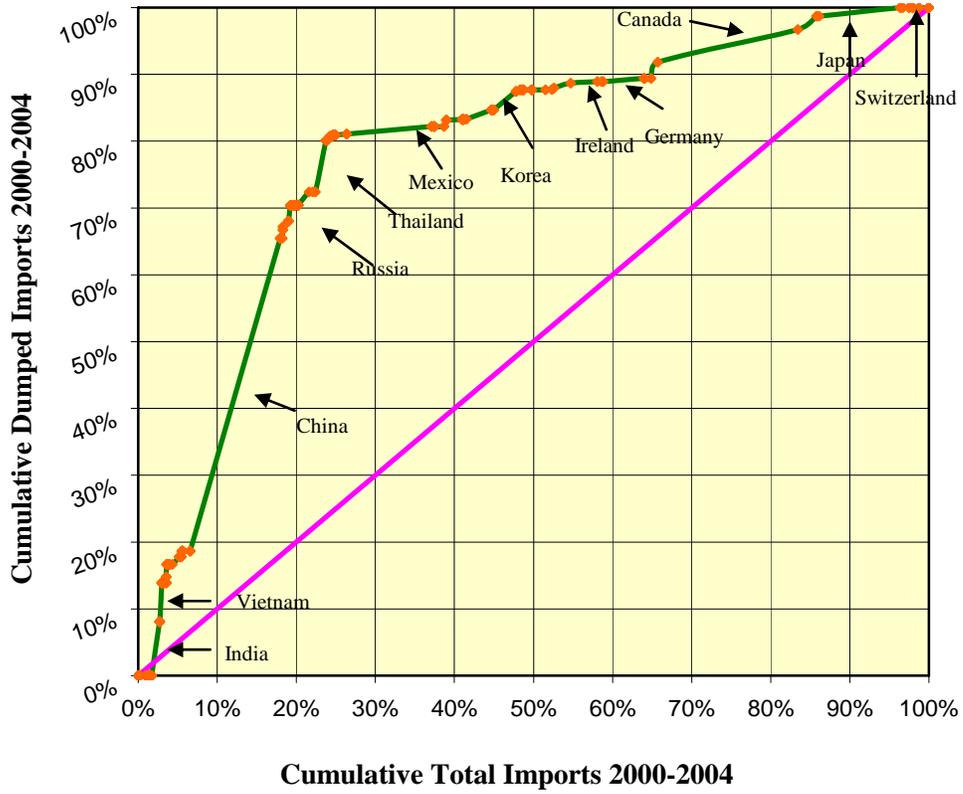
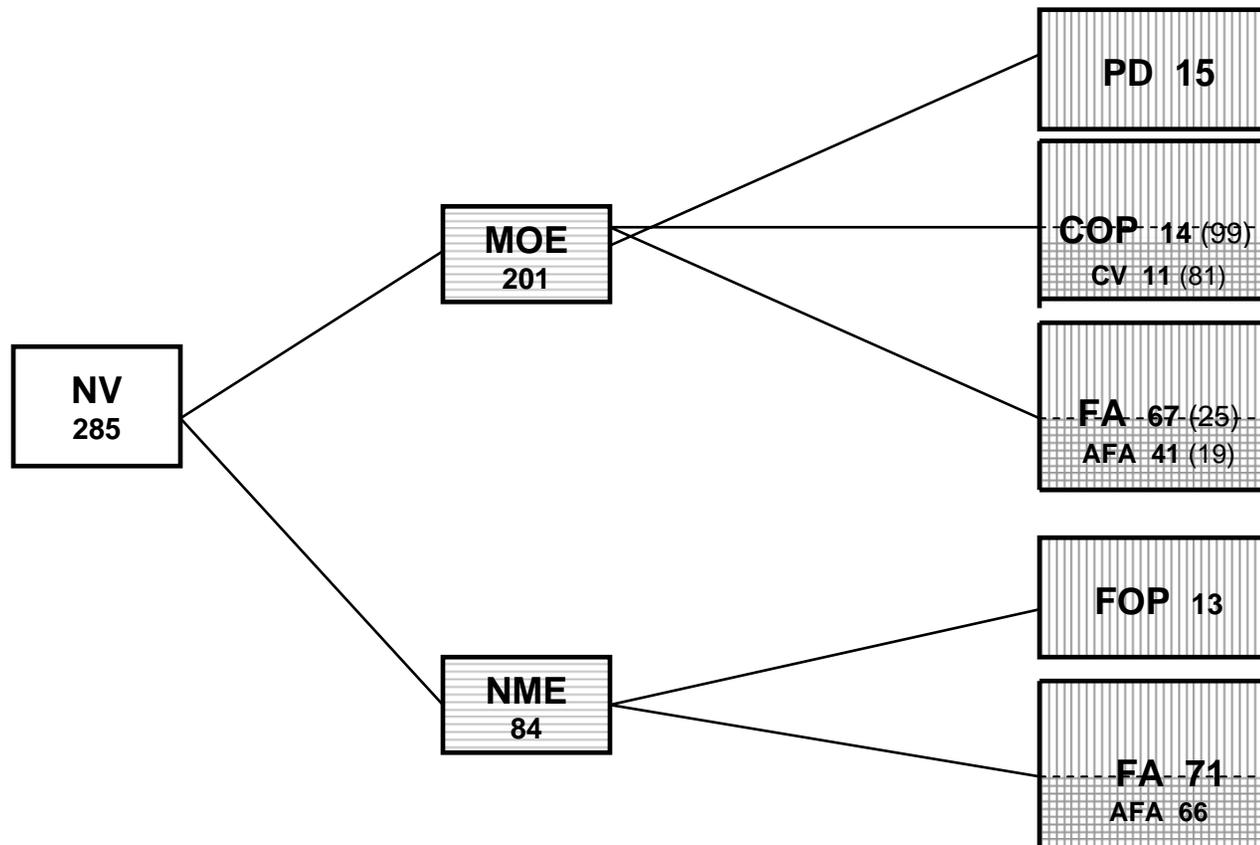


Figure 4. Alternative Methods Used by U.S. Department of Commerce to Obtain Antidumping Margins of a Foreign Firm



Note: In cases in which there is more than one foreign product (or model) exported to the U.S. by the foreign firm, the categories in the diagram apply to each product. The numbers in bold indicate number of cases in which all firms investigated received the same treatment. The numbers in parentheses indicate the number of cases where Commerce treated firms differently.

Table 1: Characteristics of U.S. Antidumping Cases for Developing and other Types of Countries, 1990-2004				
Country Type	Industrial	Developing	NME	Developing Excluding NME
Weighted Average Dumping Margins 1990-1994	95.38	32.98	91.42	18.00
Weighted Average Dumping Margins 1995-1999	36.93	91.49	166.72	21.28
Weighted Average Dumping Margins 2000-2004	14.88	83.62	122.21	17.45
Simple Average Dumping Margin 1990-1994	64.64	72.68	116.68	39.43
Simple Average Dumping Margin 1995-1999	41.20	64.24	135.52	26.37
Simple Average Dumping Margin 2000-2004	28.12	94.34	145.77	32.90
Dumping as % of Total Imports 1990-1994	1.05	1.31	0.32	5.95
Dumping as % of Total Imports 1995-1999	0.59	1.11	0.70	2.43
Dumping as % of Total Imports 2000-2004	0.19	1.53	1.49	1.62
Number of AD Cases per Value Unit of Imports 1990-1994*	109.25	301.10	653.68	213.49
Number of AD Cases per Value Unit of Imports 1995-1999*	98.97	122.57	89.41	154.10
Number of AD Cases per Value Unit of Imports 2000-2004*	178.02	105.85	82.50	152.60
*The value unit of imports is \$10,000,000 in constant 2000 dollars.				

Table 2: Relationship of Commerce Department Discretionary Practices to U.S. Antidumping Margins for Countries, 1990-2004

Independent Variable	Arithmetic Runs			Logarithmic Runs		
	(1)	(2)	(3)	(4)	(5)	(6)
MOE	23.37*** (4.77)	21.69 (1.44)	20.13 (1.3)	2.69*** (32.49)	2.94*** (11.92)	2.98*** (11.76)
MOE*COP	25.90 (0.82)	19.05 (0.61)	44.60 (0.94)	0.97* (1.83)	0.78 (1.54)	0.97 (1.25)
MOE*COP*CV	-6.11 (-0.17)	-5.35 (-0.16)	-33.70 (-0.56)	-0.42 (0.71)	-0.36 (-0.64)	-1.06 (-1.07)
MOE*FA	26.57** (2.29)	22.56* (1.90)	39.09 (1.34)	0.98*** (5)	0.92*** (4.71)	0.65 (1.36)
MOE*FA*AFA	22.17 (1.65)	18.36 (1.35)	3.92 (0.13)	0.34 (1.51)	0.16 (0.71)	0.43 (0.85)
NME	111.62*** (7.49)	41.48* (1.71)	48.74* (1.87)	4.23*** (16.78)	3.5*** (8.80)	3.49*** (8.16)
NME*FA	5.80 (0.20)	20.70 (0.73)	-23.63 (-0.6)	0.38 (0.8)	0.54 (1.17)	0.27 (0.41)
NME*FA*AFA	20.35 (0.82)	-1.76 (-0.07)	38.10 (1.04)	0.12 (0.28)	-0.07 (-0.18)	0.33 (0.55)
MOE*WTO		-7.76 (-0.98)	-4.93 (-0.52)		-0.32*** (-2.50)	-0.36*** (-2.31)
NME*WTO		26.93** (2.20)	18.22 (0.86)		0.22 (1.12)	0.28 (0.80)
MOE*COP*TIME			-4.65 (-0.70)			-0.04 (-0.35)
MOE*CV*TIME			4.99 (0.6)			0.11 (0.83)
MOE*FA*TIME			-2.00 (-0.63)			0.03 (0.61)
MOE*AFA*TIME			1.76 (0.50)			-0.03 (-0.59)
NME*FA*TIME			8.92 (1.68)			0.06 (0.74)
NME*AFA*TIME			-8.27 (-1.59)			-0.08 (-0.92)

Canada	-4.43	-4.49	-0.24	-0.26		
	(-0.19)	(-0.2)	(-0.61)	(-0.65)		
China	61.09***	57.69***	0.60*	0.56		
	(2.80)	(2.61)	(1.69)	(1.56)		
EU	5.03	4.51	-0.04	-0.07		
	(0.32)	(0.28)	(-0.17)	(-0.27)		
Japan	29.25*	29.20	0.51**	0.49*		
	(1.77)	(1.71)	(1.88)	(1.76)		
Mexico	10.64	10.42	0.41	0.41		
	(0.50)	(0.48)	(1.18)	(1.15)		
Taiwan	-7.72	-7.52	-0.51*	-0.53*		
	(-0.41)	(-0.39)	(-1.65)	(-1.67)		
Korea	-10.97	-10.25	-0.72**	-0.74**		
	(-0.62)	(-0.56)	(-2.45)	(-2.49)		
Other Asia & AUS/NZ	8.86	7.79	0.11	0.10		
	(0.56)	(0.48)	(0.43)	(0.39)		
Other Latin America	19.45	20.57	0.08	0.07		
	(1.13)	(1.17)	(0.28)	(0.24)		
Russia/USSR	65.96***	65.10***	0.82**	0.79**		
	(2.97)	(2.87)	(2.25)	(2.11)		
Adjusted R-squared	0.69	0.72	0.70	0.94	0.95	0.95
F-statistic	80.32	34.88	26.75	658.64	262.28	198.89
Number of Observations	285	285	285	285	285	285
Notes: Other Europe suppressed because of constant. The asterisks indicate levels of significance of coefficients: *, **, and *** indicate significance at the 10 percent, 5 percent, and 1 percent respectively. The t-values of the estimated coefficients are in parentheses.						

Table 3: Relationship Between Dumped Imports to U.S. and Foreign Income, 1990-2004

Independent Variable						
	(1)	(2)	(3)	(4)	(5)	(6)
INCOME	-7.06**	-13.10***	-12.85***	-13.07***	-12.77***	-12.41***
	(-2.54)	(-3.87)	(-3.84)	(-3.91)	(-3.8)	(-3.8)
INCOME^2	0.18*	0.36***	0.39***	0.36***	0.36***	0.39***
	(1.92)	(3.31)	(3.58)	(3.31)	(3.25)	(3.62)
STEEL			124.71***			142.3***
			(2.93)			(3.41)
TIME			-0.48	-0.5	-0.16	-0.63
			(-0.49)	(-0.5)	(-0.16)	(-0.66)
PCRT3				2.45***		
				(3.25)		
RER3				-0.07		
				(-0.83)		
PCRT5					1.97***	2.22***
					(2.75)	(3.18)
RER5					0.09	0.1
					(1.36)	(1.55)
CONSTANT	66.99***	115.63***	78.20**	122.24***	113.05***	69.24**
	(4.57)	(4.35)	(2.58)	(4.43)	(4.08)	(2.32)
Canada		-15.75	-5.89	-16.9	-13.98	-2.11
		(-0.5)	(-0.19)	(-0.54)	(-0.44)	(-0.07)
China		-71.57***	-32.53	-75.49***	-71.41***	-26.98
		(-3.15)	(-1.25)	(-3.38)	(-3.18)	(-1.06)
EU		-5.42	8.5	-7.75	-4.58	11.75
		(-0.28)	(0.42)	(-0.4)	(-0.23)	(0.6)
Japan		-13.25	0.27	-15.95	-14.3	1.48
		(-0.53)	(-0.01)	(-0.64)	(-0.57)	(0.06)
Mexico		-30.22	4.02	-31.77	-26.74	12.54
		(-1.27)	(0.15)	(-1.35)	(-1.13)	(0.49)
Taiwan		-1.66	24.55	-6.09	-3.43	26.39
		(-0.08)	(1.05)	(-0.28)	(-0.16)	(1.15)
Korea		1.97	29.44	-0.37	1.36	32.58
		(0.09)	(1.22)	(-0.02)	(0.06)	(1.38)

Other Asia & AUS/NZ	-52.84***	-17.03	-55.55***	-50.68**	-9.69
	(-2.62)	(-0.73)	(-2.79)	(-2.54)	(-0.42)
Other Latin America	-25.41	-0.35	-31.18	-25.45	3.01
	(-1.3)	(-0.02)	(-1.62)	(-1.32)	(0.15)
Russia/USSR	76.09***	53.35**	87.33***	84.15***	59.08***
	(3.68)	(2.45)	(4.2)	(4.08)	(2.77)
Adjusted R-squared	0.06	0.32	0.35	0.35	0.39
F-statistic	7.31	8.67	8.32	7.92	8.49
Number of Observations	193	193	193	192	192

Notes: Other Europe suppressed because of constant. The asterisks indicate levels of significance of coefficients: *, **, and *** indicate significance at the 10 percent, 5 percent, and 1 percent respectively. The "t-values" of the estimated coefficients are in parentheses.