



AMERICAN UNIVERSITY  
W A S H I N G T O N , D C

Department of Economics  
Working Paper Series

Friendly Fire?  
The Impact of US Antidumping Enforcement  
on US Exporters

by

Robert M. Feinberg and  
Kara M. Reynolds

No. 2006-004  
April, 2006

<http://www.american.edu/academic.depts/cas/econ/workingpapers/workpap.htm>

Copyright © 2006 by Robert M. Feinberg and Kara M. Reynolds. All rights reserved. Readers may make verbatim copies of this document for non-commercial purposes by any means, provided that this copyright notice appears on all such copies.

Friendly Fire?  
The Impact of US Antidumping Enforcement on US Exporters

Robert M. Feinberg<sup>\*</sup>  
and  
Kara M. Reynolds<sup>\*\*</sup>

**Abstract**

While there has been considerable interest in recent years in the role of macroeconomic determinants of antidumping actions by the US and other traditional users, on the one hand, and the determinants of the growing global usage of this trade policy instrument, on the other, there has to date been no systematic exploration of the motivations for the significant number of foreign antidumping cases filed against US exporters. Several observers have remarked that the growing number of foreign users of antidumping might threaten US exporters, but the determinants of these actions have not been examined. That is the purpose of the following study. We find that these actions are in part explained by macroeconomic forces and as a response to US export superiority in particular sectors, however a significant role (and larger than found for global antidumping more generally) is played by retaliation for US trade policy actions.

**Key words:** Antidumping, US Exports, Retaliation

**JEL classification:** F13

---

<sup>\*</sup> American University. Contact: Robert M. Feinberg, Department of Economics, American University, 4400 Massachusetts Avenue, NW, Washington, DC 20016-8029. Email: feinber@american.edu

<sup>\*\*</sup> American University. Contact: Kara M. Reynolds, Department of Economics, American University, 4400 Massachusetts Avenue, NW, Washington, DC 20016-8029. Email: reynolds@american.edu.

While there has been considerable interest in recent years in the role of macroeconomic determinants of antidumping actions by the US and other traditional users, on the one hand, and the determinants of the growing global usage of this trade policy instrument, on the other, there has to date been no systematic exploration of the motivations for the significant number of foreign antidumping cases filed against US exporters. Several observers have remarked that the growing number of foreign users of antidumping might threaten US exporters, but the determinants of these actions have not been examined. That is the purpose of the following study. We find that these actions are in part explained by macroeconomic forces and as a response to US export superiority in particular sectors, however a significant role (and larger than found for global antidumping more generally) is played by retaliation for US trade policy actions.

## **I. Some Patterns and a Literature Review**

While the EU and the US continue to be major users of antidumping laws, this type of “administrative protection” against imports has become very widespread, with 39 other WTO-member countries (plus some non-members) initiating antidumping cases over the 1995-2003 period. Focusing on the US as target for such cases, during the 1995-2003 period 138 cases were initiated through foreign antidumping agencies against US firms while 302 antidumping cases were filed with the US International Trade Commission against foreign firms.<sup>1</sup> The United States was the third leading target of antidumping actions filed by other countries, following China and Korea, accounting for

---

<sup>1</sup> This counts cases involving the same product but different countries filed at the same time as distinct cases, with the exception that all such cases filed against EU-15 members are treated as a single case (this is for consistency with the count of “inbound” antidumping cases in which cases from member countries originate at the EU level).

6.5 percent of cases initiated by countries other than the United States. Cases against US exporters were distributed in a roughly even fashion over the 9-year period, with between 12 and 21 cases per year and no clear trend, while US cases against foreign exporters increased in a reasonably steady manner from 14 in 1995 to 63 in 2001 before falling in 2002 and 2003 (to 32 and 36 cases, respectively).

The different industry distributions of these cases is quite striking: 59% of US cases against foreign exporters involved metal products (HS section XV), while 62% of foreign cases against US exporters involved HS sections VI and VII (chemicals and plastics). The leading targets of US cases were China (17%), Japan and the EU15 (10% each), Korea (7%) and Taiwan and India (5%), while the leading sources of cases filed against US exporters were Mexico (17%), India (14%), Brazil (13%), Canada (9%), China (8%), and Argentina (7%).<sup>2</sup>

Others have, of course, noted that foreign antidumping may harm US interests. A CBO paper (1998) focused on whether U.S. exporters have been harmed by and/or singled out for retaliation by new users of antidumping; they find little adverse effect to that point while noting that continued growth in antidumping by developing countries may have more impact on U.S. exporters in the future. Similarly, Lindsay and Ikenson (2001) highlight the growing threat to U.S. interests posed by new antidumping users.

---

<sup>2</sup> However, if we look at the distribution of foreign cases in recent years, from 2000-2003, the picture is somewhat different -- India (20%), China (18%), and Mexico (16%) are now 1-2-3.

Prusa (2001) briefly discusses the strategic issues involved in a government's decision to adopt an antidumping policy –actions may be aimed at deterring other users of antidumping, but this deterrence may fail resulting in a prisoner's dilemma with retaliation occurring instead. Prusa and Skeath (2002) more fully develop this point, finding evidence consistent with strategic motivations behind antidumping filings.

Blonigen and Bown (2003), applying a trigger price model which allows for the threat of an antidumping action against a country to restrain that country's own antidumping activity, find some evidence consistent with this prediction for the United States. On the other hand, Francois and Niels (2004) suggest that new users may be initiating antidumping actions to retaliate against countries taking antidumping action against their exports. They find that Mexican antidumping petitions were three-times more likely to be successful when filed against countries that had initiated a case against Mexican exports in the previous year.

Prusa and Skeath (2004) find that antidumping users are more likely to target other users of antidumping than those without such enforcement, and that countries are more likely to target exporting countries with a past history of bringing cases against them. They interpret this behavior as retaliation or tit-for-tat, though their measure fails to exhibit the immediacy of response that game theoretic models would require in order to use retaliation as a means of establishing credibility of threat, or as an effective tit-for-tat mechanism.

In Feinberg and Reynolds (2006), probit analysis is applied to a WTO database on reported member-country filings over the 1995-2003 period. The study examines whether antidumping filings may be motivated as retaliation against similar measures imposed on a country's exporters, though bilateral export flows involved and non-retaliatory impacts of past cases are also controlled for, with other motivations – macroeconomic, industry-specific and political considerations<sup>3</sup> – dealt with through industry, country and year fixed effects. Strong evidence is found that retaliation was a significant motive in explaining the rise of antidumping filings over the past decade, though interesting differences emerge in the reactions to traditional and new users of antidumping.<sup>4</sup> Our focus in this paper is to analyze whether the same patterns explain antidumping cases against the US, and to what extent US exporters can be seen as victims of the US antidumping regime.

## II. Data and Hypotheses

We utilize WTO data on the antidumping filings of all member countries against the United States in particular industry categories between 1995 and 2003.<sup>5</sup> In this research, the “industry category” is defined as one of 20 Harmonized System (HS) sections, although we limit our data sample to the 14 sections in which at least one antidumping petition was filed against the United States during the sample period. To avoid any selection bias, the dataset includes 39 WTO member countries with active antidumping enforcement during this time period, although only 19 of these countries

---

<sup>3</sup> For literature which has considered these determinants of antidumping filings see Feinberg (1989;2006), Feinberg and Hirsch (1989), Leidy (1997), Knetter and Prusa (2003), and Irwin (2005).

<sup>4</sup> An additional motivation which has been proposed for the increased global usage of antidumping is as a post-WTO quid pro quo for general trade liberalization. This is discussed in Miranda et al (1998) and Feinberg and Reynolds (2005).

<sup>5</sup> We thank Raul Torres of the World Trade Organization for assistance in obtaining this data.

filed antidumping cases against the United States.<sup>6</sup> In order to observe a one year lag in filings to account for possible retaliation motivations, we limit our sample to the 1996 to 2003 period; the final dataset includes 4,312 observations. At least one antidumping petition was filed in 2.4 percent of these observations.

To study the determinants of the decision to file an antidumping petition against the United States, we estimate a population-averaged probit model in which the dependent variable equals 1 if a particular country filed at least one antidumping petition against a particular industry in the United States in the year in question. The model accounts for correlations across years in particular country-industry combinations by adjusting the covariance matrix of the estimated parameters. Marginal effects from this method can be interpreted as the average effect across the entire sample of a one unit change in the independent variables of interest on the probability that a particular country will file a petition against a particular industry in the United States. Alternatively, the marginal effects can be interpreted as the change in the proportion of observations filing antidumping petitions due to a change in the independent variable.<sup>7</sup>

Our primary interest in this paper is to investigate whether antidumping actions against US exporters can be explained in part as retaliation for earlier antidumping

---

<sup>6</sup> Members are the only countries required to report their antidumping filings to the WTO, therefore the dataset may underestimate the number of petitions filed by new WTO members prior to joining. We therefore exclude Taiwan from the data sample, and include China only after its inclusion in the WTO in 2000.

<sup>7</sup> We also estimate parameters using a random-effects probit model, which explicitly accounts for unobserved heterogeneity across country and industry combinations by including a country-industry specific, normally-distributed error with a mean of zero and a constant variance. The results were qualitatively similar to those presented here. Estimation of a fixed-effects probit model, which suffers from the incidental parameters problem, was not feasible given the size of the sample.

investigations by the United States. Specifically, we hypothesize that foreign industries may choose to file one or more antidumping petitions against their US competitors to directly retaliate for petitions filed by these competitors the previous year. However, as explained in Feinberg and Reynolds (2006), retaliation may also occur at the country-level. For example, the government agency charged with enforcing antidumping statutes may be more likely to make an affirmative determination and impose larger dumping margins against US firms if the United States targeted it in antidumping cases filed the previous year. If so, firms will anticipate higher expected benefits from filing cases against the United States, and will thus be more likely to file antidumping petitions against it.

To control for retaliation by specific industries we include a dummy variable that indicates whether the United States filed an antidumping case against the importing country and industry category during the past year (CAT). To control for possible country-level retaliation motives, we include a dummy variable that indicates whether the United States filed a case against any other industry in the importing country in the past year (OTHER). Because broad industry categories may cause the CAT and OTHER variable to both pick up retaliation on the country level, in other specifications we instead include a single variable that indicates whether the United States filed at least one case against the importing country in the previous year (RETALIATION).

We hypothesize that a country will be more likely to be deterred from filing antidumping petitions against the United States if the United States is an important export



market for the country, particularly if the United States has proven through its own active antidumping use that it has the ability to retaliate against the importing country. As a measure of the potential threat from the United States' own antidumping enforcement, we include the importing country's exports to the United States as a share of its total world exports multiplied by the total number of antidumping petitions filed by the United States in the previous year (DETER). If countries are indeed deterred from filing antidumping petitions against the United States due to the US history of antidumping enforcement, we would expect this variable to be negative.

The likelihood of filing a case against the United States in a particular industry category should clearly depend upon the level of imports from the United States in that category. We therefore include real annual bilateral imports in the broad HS section category (IMPORTS) in the estimating equation.<sup>8</sup> In addition, as discussed in Bown and Crowley (2004), antidumping cases filed against one country may divert its trade flows elsewhere leading to more import protection being sought by third countries, including antidumping filings against the United States. We, therefore, include a variable (DEFLECT) which equals the number of global antidumping cases filed the previous year in the particular industry category, excluding those filed against the importer being considered.

This research also investigates whether the macroeconomic factors that researchers have found to be important determinants in US filings are equally as

---

<sup>8</sup> We collected U.S. export and import data from the U.S. International Trade Commission's Trade Dataweb, and adjusted these data to 2000 dollars using the Export and Import Price Indexes of the U.S. Bureau of Labor Statistics.

important in the likelihood that foreign countries will target US exporters in antidumping actions. For example, both Knetter and Prusa (2003) and Feinberg (2006) find that countries are more likely to file antidumping petitions following a real appreciation of a country's currency or a fall in the country's GDP growth, at least in four of the traditional users of antidumping regulations, the United States, Australia, EU and Canada.

Intuitively, both of these factors make it more likely that the government will find that the domestic industry has been injured by imports from the targeted country and therefore more likely that the antidumping petition will be successful. To account for these macroeconomic determinants, we include the lagged log bilateral real exchange rate (EXCHANGE) and real GDP growth (GDPGROWTH).<sup>9</sup> The real GDP growth variable is the 3-year growth rate, or the three years prior to the filing date.

Finally, we include year-specific fixed effects to control for macroeconomic conditions in the United States which may result in an increase in antidumping actions against US exporters.

### III. Results

Marginal effects associated with the population-averaged probit model are presented in Table 1. Specification 1 attempts to decompose the retaliation effect into an industry-specific (CAT) and the country-level (OTHER) retaliation. The marginal effects indicate that while there is no evidence that individual *industries* choose to retaliate, retaliation does occur on a *country-level*. Specifically, countries are on average 1.7

---

<sup>9</sup> We calculate the real bilateral exchange rate using nominal exchange rate and consumer price index data from the International Monetary Fund's International Financial Statistics. We normalize each series by dividing by its sample mean prior to taking logs. The real GDP growth variable is calculated from data from the World Bank's World Development Indicators.

percentage points more likely to file an antidumping petition against an industry within the United States if the US targeted it in an antidumping action the previous year. This represents a 100 percent increase in the predicted probability of filing against the United States.

Given that the estimates suggest that retaliation occurs at the country-level rather than at the industry level, the other two specifications in Table 1 combine the industry-specific and country-specific retaliation variables into a single retaliation variable. Results from Specification 2 are similar to those in Specification 1—countries are 1.8 percentage points more likely to file against an industry within the United States if the US targeted it in an antidumping action the previous year. This result does not seem to be driven by antidumping petitions filed in the steel industry, as indicated by the results in Specification 3.

Comparing these results to those in Feinberg and Reynolds (2006), retaliation appears to play a larger role in a country's decision to file antidumping actions against the United States compared to other target countries. Unfortunately, the estimates from this research are not directly comparable to those presented in Feinberg and Reynolds (2006) due to differences in methodology. Therefore, we replicate the population-averaged probit model using the full sample of antidumping cases filed against the 72 exporting countries used in Feinberg and Reynolds (2006).<sup>10</sup> The results indicate that a country is 0.59 percentage points more likely to file a petition against any country that

---

<sup>10</sup> We include a importing country-exporting country-industry category specific error in the estimation. Results from this estimation are available from the authors upon request.

targeted it with an antidumping action the previous year, considerably less than the 1.8 percentage point increase in the likelihood of filing against the United States.

Of course, because the United States tends to use antidumping regulations more often than many other countries, it is not surprising that cases filed against the United States are in retaliation for an earlier US action than those aimed at other countries. Retaliation was a possible motivation in 30.2 percent of observations in the US subsample, compared to only 3.6 percent of observations involving the 72 exporting countries in the full sample (i.e., the mean value of the retaliation dummy variable is considerably higher for the US subsample).

To further investigate the significance of retaliation in the level of antidumping protection against US exporters, we simulate what would happen to actions targeting US exporters if the United States eliminated its own antidumping enforcement. Using the coefficient estimates from the model, we estimate the probability that each country will file at least one antidumping petition against particular US industries in a given year. The probability that individual countries will file against a particular industry ranges from 0.07 percent to 46.0 percent. By summing these probabilities, we find that the model predicts at least 100 cases filed against the United States between 1996 and 2003.<sup>11</sup> Recalculating these probabilities assuming that the United States had no antidumping enforcement during this time period, thus eliminating any possible retaliation motives, we

---

<sup>11</sup> This is just slightly less than the 105 actual observations in which antidumping petitions were filed. Because the dependent variable is a dummy variable that equals one if at least one petition is filed in a particular country-industry observation, we cannot predict the exact number of petitions, only the number of country-industry combinations in which petitions will be filed.

find that the number of antidumping petitions filed against the United States would have fallen to 76—a decrease of over 25 percent.

As noted above, we expected countries to be less likely to file antidumping petitions against the United States if the US was one of its leading trading partners due to fear of retaliation. However, the marginal effect from the deterrence variable (DETER) is insignificant. All other estimates, however, are significant and of the expected sign. Not surprisingly, the likelihood of filing an antidumping petition against a particular industry within the United States increases with the level of imports from that industry. A one billion dollars increase in imports (IMPORTS) increases the probability of filing by 0.13 percentage points, or 7.8 percent.

Similarly, the estimates also provide evidence to support the hypothesis that the increase in global antidumping activity may be self-perpetuating. The likelihood that a country will file an antidumping action against the United States in a particular industry increases 0.03 percentage points, or 16.7 percent, with each antidumping case filed against the same industry in other countries the previous year (DEFLECT). This may be due to the fact that these earlier cases result in a surge of exports of a particular product to the importing country, prompting the importing country to impose new antidumping protection.

As found in previous research as well, we see that macroeconomic determinants have a significant impact on the likelihood that a country will file an antidumping petition

against the United States. A one percent decrease in the importing country's three-year GDP growth rate (GDPGROWTH) increases the likelihood of filing an antidumping petition against the United States by 0.07 percentage points, or 40 percent. A real appreciation of the importing country's currency also increases the likelihood of filing an antidumping petition against the United States.

#### IV. Conclusions

Our results confirm earlier findings explaining antidumping usage (both for the US and more generally) by macroeconomic forces and export flows in particular sectors. However a significant role (and larger than found for global antidumping more generally) seems to be played by retaliation for US trade policy actions. We have not performed any welfare calculations to judge the societal impact, though there is a general consensus among economists that consumer costs from antidumping policy exceed gains to domestic producers (and their workers) of "like products". It seems likely that the additional costs imposed on exporters identified here will tip the balance still further against antidumping enforcement.

## References

- Blonigen, Bruce A., and Chad P. Bown. 2003. Antidumping and Retaliation Threats. *Journal of International Economics* 60: 249-73.
- Feinberg, Robert M. 1989. Exchange Rates and Unfair Trade. *Review of Economics and Statistics* 71(4): 704-707.
- Feinberg, Robert M. 2005. U.S. Antidumping Enforcement and Macroeconomic Indicators Revisited: Do Petitioners Learn? *Review of World Economics* 141(4): 612-622.
- Feinberg, Robert M., and Barry T. Hirsch. 1989. Industry Rent Seeking and the Filing of “Unfair Trade” Complaints. *International Journal of Industrial Organization* 7: 325-340.
- Feinberg, Robert M. and Kara M. Reynolds. 2005. Tariff Liberalization and Increased Administrative Protection: Is There a Quid Pro Quo? *American University Working Paper No. 2005-01*.
- Feinberg, Robert M. and Kara M. Reynolds. 2006. The Spread of Antidumping Regimes and the Role of Retaliation in Filings. *Southern Economic Journal*.
- Francois, Joseph F., and Gunnar Niels. 2004. Political Influence in a New Antidumping Regime: Evidence from Mexico. Timbergen Institute Working Paper No. TI 2004-011/2.

Irwin, Douglas A. 2005. The Rise of US Antidumping Activity in Historical Perspective. *The World Economy* 28(5): 651-668.

Knetter, Michael M., and Thomas J. Prusa. 2003. Macroeconomic Factors and Antidumping Filings: Evidence from Four Countries. *Journal of International Economics* 61: 1-17.

Leidy, Michael. 1997. Macroeconomic Conditions and Pressures for Protection Under Antidumping and Countervailing Duty Laws—Empirical Evidence from the United States. *International Monetary Fund Staff Papers* 44(1): 132-145.

Lindsay, Brink, and Dan Ikenson. 2001. Coming Home to Roost: Proliferating Antidumping Laws and the Growing Threat to U.S. Exports. *Cato Institute Trade Policy Analysis* 14.

Miranda, Jorge, Raul A. Torres, and Mario Ruiz. 1998. The International Use of Antidumping: 1987-1997. *Journal of World Trade* 32: 5-71.

Prusa, Thomas A. 2001. On the Spread and Impact of Antidumping. *Canadian Journal of Economics* 34: 591-611.

Prusa, Thomas A., and Susan Skeath. 2002. The Economic and Strategic Motives for Antidumping Filings. *Weltwirtschaftliches Archiv* 138: 389-413.



Prusa, Thomas A., and Susan Skeath. 2004. Modern Commercial Policy: Managed Trade or Retaliation? In *The Handbook of International Trade Volume II: Economic and Legal Analyses of Trade Policy and Institutions*, edited by E.K. Choi and James Hartigan. Malden, MA and Oxford, UK: Blackwell Publishers.

U.S. Congressional Budget Office. 1998. *Antidumping Action in the United States and Around the World: An Analysis of International Data*. Washington, DC: U.S. Congressional Budget Office.

Table 1  
Determinants of the Decision to File Antidumping Petitions Against the United States  
Marginal Effects Estimated with a Population-Averaged Probit Model<sup>\*</sup>

	(1)	(2)	(3)
CAT	0.00769 (0.01108)		
OTHER	0.01692* (0.00618)		
RETALIATION		0.01548* (0.00594)	0.01820* (0.00635)
RETALIATION* METALS			-0.01189* (0.00490)
DETER	0.00013 (0.00029)	0.00012 (0.00029)	0.00017 (0.00028)
DEFLECT	0.00029* (0.00009)	0.00028* (0.00008)	0.00034* (0.00009)
IMPORTS (billions)	0.00127* (0.00041)	0.00134* (0.00042)	0.00124* (0.00040)
GDPGROWTH	-0.07150* (0.02970)	-0.07375* (0.03035)	-0.07322* (0.02953)
EXCHANGE	0.02315** (0.01193)	0.02336** (0.01212)	0.02299** (0.01188)
Year Fixed Effects	Yes	Yes	Yes
Number of Observations	4,312	4,312	4,312
Predicted Probability	0.0168	0.01723	0.0165

<sup>\*</sup> Standard errors in parentheses. \*, \*\* indicate those marginal effects significant at the 95 and 90 percent level, respectively.