ECONOMIC ISSUES

QUANTIFYING CAUSES OF INJURY TO U.S. INDUSTRIES COMPETING WITH UNFAIRLY TRADED IMPORTS: 1989 to 1994

by

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EXECUTIVE SUMMARY

Under United States law, domestic firms can petition for protection from foreign competitors whose exports to the U.S. have been subsidized or dumped, that is, sold in the U.S. at less than fair value. In our 1994 report, *Effects of Unfair Imports on Domestic Industries: U.S. Antidumping and Countervailing Duty Cases, 1980 to 1988*, we quantified the effect of dumped and/or subsidized imports on the revenue of competing domestic industries. The purpose of this report is to (i) extend our earlier analysis to the period 1989 to 1994; (ii) examine the impact of these unfair trade practices on the workers and the consumers of the competing domestic industries; and (iii) examine the effects of other sources of injury to these competing domestic industries.

We construct a computable partial equilibrium model to estimate the effect of subsidized and/or dumped imports on competing U.S. industries. We use this model to compute what the sales and output of the domestic industry would have been in the absence of the unfair trade practice(s), and compare this to the actual sales and output of the domestic industry.

There were 132 final antidumping and countervailing duty cases decided by the U.S. International Trade Commission (USITC) between 1989 and 1994. Four of the cases had no unfairly traded imports and therefore we could not estimate any harm from such imports. Of the remaining 128 cases there is sufficient data to estimate injury for 63. For these 63 cases we estimate that the unfair trade practice reduced total revenue of the affected U.S. industry by 5 percent or less in 32 cases (51 percent of 63 cases).

margins are generally believed to be biased upward in both periods, and it appears that this is especially so in the latter period.

We are able to estimate the employment effects of subsidization and dumping for 41 cases. In 26 of them the unfair trade practice reduced employment in the affected industry by less than 100 workers. The four cases with the largest employment reductions have job losses that range between 500 and 800 workers.

We are able to estimate the effects of unfair trade practices on U.S. consumers in 54 cases. The total benefit to consumers from unfair trade practices in these 54 cases is at least $2.9 billion annually (1992 dollars). Benefits in individual cases range from $50 thousand to $412 million. There are 39 cases in which we can compare the gains to consumers with the job losses from unfair trade practices. The consumer gain per job loss ranges widely – between $27 thousand and $3.6 million. In four cases the consumer gain per job lost is less than $100 thousand, while in seven cases it exceeds $1 million.

In 44 of the 63 cases we are also able to quantify various causal factors that affected the performance of domestic industries. Most of the 44 industries experienced some form of difficulty over the three year period covered in the typical USITC investigation. Of the 44 industries 38 had declining revenue, 43 had declines in either output or real price, and 25 had declines in both output and real price. The average (median) decline in revenue was 12.7 percent, the average decline in output was 2.5 percent, and the average decline in price was 9.1 percent.

There are various reasons for these adverse experiences. We measure the effect of changes in various economic forces that could injure the domestic industry: (i) a decrease in aggregate demand, (ii) an increase in demand for foreign made products relative to domestically produced products, (iii) an increase in cost of domestic production, (iv) an increase in the supply of fairly traded imports, and (v) a decrease in the price of unfairly traded imports. Changes in aggregate demand caused a decline in revenue as well as a decline in output for 36 industries. Changes in consumer perceptions of the relative quality of domestic and imported products adversely affected revenue as

well as output in 29 industries. Changes in aggregate demand was the largest

The United States has considerable experience with administering the laws that restrict

unfairly 89pdd

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[5] There is also an earlier AD law, enacted in 1916, but it has been rarely used. The 1916 law was found illegal under the GATT/WTO system in 2000 in part because it requires evidence of intent by foreign firms to injure U.S. firms and provides for such penalties as treble damages and prison sentences. The GATT/WTO system only requires an actual effects test of injury to domestic industry and only allows for special tariff rates on unfairly traded imports. The U.S. has not appealed the decision by the WTO panel. WTO (2000).

[6] Information about AD and CVD cases before 1980 is sketchy. However, according to Seavey (1970, p. 65), from the enactment of the AD law in 1921 through 1967, the vast majority of the 706 AD cases opened, 89.4 percent, were terminated with a finding of no injury. During much of this time the Department of the Treasury was responsible for both determining whether dumping or subsidy occurred and whether there was consequent injury to a domestic industry. In 1954 responsibility for injury determinations in AD cases was shifted from the Treasury Department to the USITC. A more important change occurred in 1980, when responsibility for calculating dumping margins in AD cases and subsidy margins in CVD cases was shifted from the Treasury Department to the Department of Commerce. These margins are the special tariff rates that can be imposed on imports found to be subsidized or dumped. R. E. Baldwin (1985), p. 117f.

[7] As discussed by Hansen and Prusa (1996) one of the most significant changes in U.S. law was the so-called cumulation requirement enacted in 1984. This requirement applies when a domestic petitioner alleges injury by imports from two or more countries. The revised law requires that the USITC assess the impact of cumulative imports from all cited countries as opposed to assessing the impact of imports from each country individually.

[8] Blonigen and Prusa (2001) provide a valuable survey of the literature, which has expanded considerably in the past dozen years. Two particularly noteworthy references are Boltuck and Litan (1991) and Lawrence (1998) as both are collections of papers on various aspects of AD and CVD laws and their administration. In addition, legal scholars have offered significant contributions to this literature, including Cass (in Cass and Boltuck, 1996) and Palmeter (1991a).

[9] Palmeter (1991b, p. 89) maintains that U.S. AD law is not even as good as a "dog law." A dog law is one where a person is notified that a certain act is illegal after doing the act: a dog is broken of a bad habit by beating him after he commits the act. (According the Palmeter the label "dog law" was used by Jeremy Bentham to characterize English common law.)

[10] Finger (1993), p. viii.

[11] Krueger (1999), p. 912.

(AD/CVD) trade laws, commentators such as Jackson (1989, p. 217) have noted an increased

blurring of the distinction between fair and unfair trade owing to disagreement about what

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[19] Kaplan (1991). Moreover, some industries, notably steel, have used both the EC and AD/CVD laws to attempt to restrict imports.

[20] However, it may be more difficult for a domestic industry to obtain relief in escape clause case versus an unfair import practices case. The statutory standard for injury to domestic industry in escape clause cases – "serious injury" – is generally regarded as more stringent than that in unfair import practice cases -- "material injury".   See for example Jackson (1989), p. 236.

[21] This involved the methodology of exclusively comparing prices to prices – prices to the U.S. market and prices to home market – and was not affected by any adjustments for below cost sales on exports. Below cost sales are more problematic because of the difficulty of specifying and measuring average cost. As noted subsequently, DOC calculates a "constructed value" to measure cost. Finally, the numbers reported in the text only refer to dumping cases involving market economies because of the possible arbitrariness of prices (and costs) in non-market economies.

pricing below cost. However, this "cost", which is officially designated "constructed value", is calculated by DOC and generally expected to overstate the true cost to produce a particular product.[22] It is therefore very likely that true price discrimination and pricing below cost are the exceptions rather than the rule in AD investigations.

A fourth reason is the belief that AD and CVD laws are in the long run interests of the overall economy and U.S. consumers. The economic rationale for such a belief must somehow overcome the notion that all that matters is that cheaper imports now are better for consumers and the economy as a whole. Here we must distinguish between the AD law and the CVD law. The CVD law is directed against foreign governments who subsidize exports or exporting industries. But absent some basis for believing that foreign government will subsequently raise export price, to make it higher than it would otherwise be absent the subsidy, there is little justification for believing there will be consumer   4.25 -21

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[22] The upward bias in constructed value has long been recognized by economists. See for example, Litan and Boltuck (1991).

[23] Snape (1991) argues that the principal economic problem with subsidies is the import restraints that accompany them. The challenge is that if the import restraints are removed the consequence would be enormous burden on the Government budget (in maintaining the subsidies). Also, Hufbauer and Shelton-Erb (1984, p. 8) argue that there is a multilateral rationale for CVD laws. However, no formal framework is provided to analyze the issue.

[24] In addition economists have constructed models in which the threat of AD enforcement is pro-competitive in the importing country. For example, Reitzes (1993) uses a strategic two-period duopoly model under both Cournot and Bertrand conjectures. Reitzes' paper is noteworthy because it constructs a two period model that allows him to capture some of the principal features of the U.S. regulatory approach in which AD duties are based on past period pricing. However, as far as we are aware there are no systematic empirical studies of this issue.

[29] Shin (1998, pp. 85, 94) found that of 451 investigations completed by the USITC in the 1980s at most 39 would have involved predatory or strategic dumping.

[30] Shin applied a series of increasingly more demanding (in terms of data requirements) screens or criteria to actual dumping investigations in order to eliminate those unlikely to involve predation. For example, one screen is to delete cases where there are many foreign firms engaged in dumping because of the likelihood of coordination/collusion (necessary for predation) is lower when there are many foreign firms. For similar reasons, another screen deleted investigations where dumped firms were in several countries.

[31] Moreover, unless predatory or strategic dumping is involved it is not necessary to consider separately the questions of whether international price discrimination dumping or foreign underselling harm consumers and the economy generally. Note that the general view of economists on price discrimination (e.g., Klein in FTC (2001, p. 81), Varian (1989)) is that it is pervasive but does not generally signify competitive problems. Similarly, underselling by foreign firms is also pervasive in AD economy in   pervasive fil836   in   in

[36] Another recent court case concerns a world-wide price-fixing cartel in rubber thread involving producers in Malaysia, Indonesia, and Thailand that began in December 1991. In this case Malaysian producers initiated efforts to form a cartel after an AD investigation was opened. The AD petition was filed on August 19, 1991. Dee-K Enterprises, Inc v. Heveafil Sdn et al, USCA4, July 30, 2002.

[37] In other recent cases, involving for example citric acid and vitamins, the relationship between cartelization and antidumping is less clear. See Evenett et al.(2001). The possibility that multinational firms based in the US and the EC cooperate in using antidumping laws against smaller rivals has also been explored by Maur (1998). Maur mentions as a possible example the successive AD filings in 1991 in the EU and then three months later in the US by the same three multinational firms (Dupont, Hoechst, and ICI) against Korean exporters of PET film. Maur also cites possible cooperation between the sole US producer of potassium permanganate (Carus) and the sole European producer (Asturquimica) where the latter

competitors as established companies leave the industry."[41]

Finally, a general concern about the use of AD and CVD in recent years led to an agreement among Trade Ministers at the 2001 WTO Ministerial at Doha to put them on the agenda for the next round of multilateral trade negotiations.[42] Further information about the effects of AD and CVD investigations can help inform the forthcoming negotiations.[43]

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[41] *Suramerica v. U.S.,* 818 F. Supp. 348 at 366 (CIT 1993). The USITC and Southwire appeal of the CIT decision to the CAFC was denied in February 1995 (60 FR 20478).

[42] World Trade Organization (2001).

[43] Moreover, there have been several proposals in recent years to either repeal AD altogether (McGee, 1993) or to reform it, in part drawing on competition policy precepts (Hoekman and Mavroidis, 1996, Lipstein, 2000, and Messerlin, 1994).

CHAPTER 2

BACKGROUND ON U.S. ANTIDUMPING AND COUNTERVAILING DUTY CASES

This chapter reviews antidumping (AD) and countervailing duty (CVD) actions taken by the United States during the period 1980 to 1994. Characteristics of AD and CVD cases decided during this period are also discussed.

A. THE PRACTICES OF DUMPING AND SUBSIDIZATION OF IMPORTS

Under U.S. law dumping occurs when a foreign firm charges a price for exports to the United States that is less than fair value (LTFV).[44] The law defines fair value as either: (1) the price foreign firms charge in their home market or, if such sales are insignificant, the price charged on exports to a third country ("price discrimination"), or (2) calculated unit cost of foreign producers ("constructed value").[45] If imports are found to be dumped and are also found to injure a domestic industry, then a remedial AD duty is imposed on the unfair imports. This duty is based on the dumping margin calculated for the case. The dumping margin is the percentage by which fair value exceeds price charged for exports to the United States.[46]

Under U.S. law, subsidization of imports results from the practice of foreign governments in providing certain grants or bounties to their producers.[47] If imports are found to be subsidized, and also found to injure a domestic industry, then a remedial CVD is imposed on the unfair imports. This duty is based on the subsidy margin for the case, which is the net benefit conferred by foreign

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[44] 19 U.S.C., sec. 1673 ("Imposition of antidumping duties").

[45] 19 U.S.C., sec. 1677b ("Foreign market value").

[46] The methods used to calculate dumping margins and determine U.S. price and foreign value for the period relevant in this study are explained in U.S. Department of Commerce, Import Administration, International Trade Administration, *Antidumping Manual*, September 1992. Several papers critical of Commerce Department methods and procedures are found in Boltuck and Litan (1991). See also USITC (1995, chap. 2) for a discussion of changes resulting from the Uruguay Round Agreement.

[47] 19 U.S.C., sec. 1671.

government to its producers expressed as a percent of the value of domestic production or value of exports.[48]

B. ADMINISTRATION OF ANTIDUMPING AND COUNTERVAILING DUTY LAWS

In the United States AD and CVD investigations are divided into two parts and involve two agencies. The International Trade Administration (ITA) of the Department of Commerce determines whether dumping or subsidization has occurred and if so calculates the dumping or subsidy margins. The U.S. International Trade Commission (USITC) determines whether a domestic industry is materially injured by reason of dumped or subsidized imports. Both agencies make a preliminary and (if necessary) a final determination. The investigations are subject to a strict statutory timetable.

Tables 2.1 and 2.2 give the results of AD and CVD investigations conducted by the United States between 1980 and 1994. (Note that all tables and diagrams are at the end of this study.) The unit of observation for these tables is a country-product pair potentially subject to AD or countervailing duties.[49] The outcomes listed in the order in which they can occur during an investigation, except for (5), which can occur at any time, are:

(1) at the conclusion of its preliminary phase injury investigation, the USITC

makes a negative injury determination (Preliminary USITC Negative);

(2) at the conclusion of its final phase margin investigation, ITA determines that

the dumping or subsidy margin is *de minimis*, i.e., less than 0.5 percent (Final

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[48] For production subsidies the subsidy margin is the ratio of net benefits to value of domestic production while for export subsidies the subsidy margin is the ratio of net benefits to value of exports. The methods and procedures used to calculate the subsidy margin are discussed in Holmer, Haggerty, and Hunter (1984), pp. 301 to 561. Also see Department of Commerce, International Trade Administration, "Countervailing Duties: Notice of Proposed Rulemaking and Request for Public Comments," *Federal Register*, 19 CRF Part 355 (May 31,1989), pp. 23366 to 23386. See also USITC (1995, chap. 2) for a discussion of changes resulting from the Uruguay Round Agreement.

[49] This differs from reporting conventions adopted by the USITC and ITA. For example, the USITC distinguishes between AD and CVD cases and then assigns a specific investigation number to each country and product group. However, for a few product groups there may be two (or more) distinct products. The outcomes for each distinct product may differ. Under our definition of the unit of observation it is possible to report the full detail for all the different possible outcomes.

ITA Negative);[50]

(3) at the conclusion of its final phase injury investigation, the USITC makes a

negative injury determination (Final USITC Negative);

(4) at the conclusion of its final phase injury investigation, the USITC makes an

affirmative injury determination (Final USITC Affirmative);

(5) investigations may be concluded if the petition is withdrawn, suspended, or

terminated (Other).

Finally, during 1980-1994 there were twice as many AD decisions as CVD decisions – 723

versus 368. The number of CVD decisions has declined over the period. However, there is no

apparent trend in the number of AD decisions.

C. CHARACTERISTICS OF SELECTED CASES, 1989-1994

In Morkre and Kelly (1994) we gave estimates of injury to domestic industry from unfairly

traded imports for 1980-1988 and we now turn to some empirical issues relevant to similar

estimates for 1989-1994. The estimates themselves appear in the next chapter. The unit of

observation for the injury estimates is a "case", which is defined in terms of a final USITC

determination.[51] These determinations identify the relevant product and (cumulation of) countries

that supply the unfairly traded imports.

It is possible to calculate injury estimates for 63 of the 132 final AD and CVD cases decided

by the USITC between 1989 and 1994 (see Table 2.3).[52] In addition, there are four cases where

there are no unfair imports and therefore no injury. For the remaining 65 cases the data needed to

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[50] Beginning in 1995, as called for under the Uruguay Round, the U.S. increased the *de minimis* margin to 2 percent.

[51] See the Appendix where the term "case" as used in this study is defined.

[52] We cover all final cases decided by the USITC, both affirmative and negative determinations.

[53] One such case is the 1991 action against Japan for allegedly dumping flatpanel displays. This case raises a number of issues. One relates to the

- $10.3 billion, subsidized softwood lumber from Canada (case 25300);

- $11.3 billion, dumped and subsidized

D. CONCLUSIONS

Between 1980 and 1994 AD and CVD actions averaged 48 and 25 per year respectively. While the rate of AD investigations moved irregularly over time CVD investigations trended downward.

Final AD and CVD cases decided between 1989 and 1994 are likely to involve greater effects from unfairly traded imports than corresponding cases decided between 1980 and 1988. The principal reason is that dumping and subsidy margins and domestic market shares of unfair imports have increased over time. This is examined further in the next chapter.

Finally, the 1989-1994 cases reveal a substantial diversity in terms of the types of products involved (e.g., high tech versus standardized) and in terms of the sizes of the relevant markets and domestic industries. In this respect these cases are similar to the 1980-1988 cases.

CHAPTER 3

EFFECTS OF UNFAIRLY TRADED IMPORTS ON
DOMESTIC INDUSTRIES, CONSUMERS, AND WORKERS

This chapter provides detailed estimates of the effects of dumped and subsidized imports in the United States over the six-year period 1989 to 1994. We consider the effect of such imports on (i) the domestic industries most directly affected by the imports, (ii) the workers employed in these industries, and (iii) the U.S. consumers who purchase unfair imports and related domestic products. The principal source of information about unfair imports is the USITC, specifically the reports it prepares for all final stage antidumping (AD) and countervailing duty (CVD) investigations. Estimates are provided for all final determinations to the extent that available data allow. The chapter is divided into three parts. The first discusses methodology; the second presents the estimates; the third explains why our estimates tend to overstate the injury suffered by domestic industry.

A. METHODOLOGY

General Approach

The methodology used in this report is essentially the same as in Morkre and Kelly (1994), which gives a detailed treatment. We therefore only discuss the principal features of our approach here.[57]

Isolating the effects of unfair imports. In order to properly gauge the impact of unfair imports on domestic industries it is necessary to isolate their influence from the host of other facindu3iBe0.1267 Tc 0 Tw (of) Tj

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[57] For some extensions see Kelly and Morkre (1998).

and products that threaten older processes and products. Furthermore, unfair imports is only one
of several international factors that may harm domestic producers. If the U.S. dollar appreciates
in foreign exchange markets, if there is a shift in comparative advantage, then imports will increase
and cause injury to some domestic industries.

Counterfactual analysis.

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[58] The model is written in GAMS and solved using the MINOS solver. For a description of GAMS see Brooke, Kendrick, and Meeraus (1992).

[59] We adopt the determination of the U.S. International Trade Commission with respect to the definition of the relevant domestic industry.

[60] According to John Suomela, former head of the Office of Economics at the USITC, in unfair import cases "[I]t is rare that the characteristics of the imported product match those of the domestic product... Usually there is a range of overlap between the imported and the domestic product..." See Suomela (1993), p. 62-3.

[61] For example, crude oil, frozen orange juice concentrate, and sugar are all highly standardized products, as reflected by the fact that they are all traded in commodities markets. However, even for standardized products there may be quality or transactions factors that differentiate imported from domestic products.

[62] Two econometric studies support the proposition that imports and corresponding domestic products are differentiated products. See Reinert and Roland-Holst (1992) and Shiells, Stern, and Deardorff (1986). These two studies examine broad aggregates (163 sectors based on the BEA input-output table for the former and 122 3-digit SIC industries for the latter). However, there is also support for the product differentiation specification for such seemingly standardized products as steel. See Jondrow, Chase, and Gamble (1982).

Implementing the Model

To solve the model for prices and quantities we need to specify values for two types of parameters.[70] The first are several elasticities and the second are actual price and quantity data.

Elasticities. The relevant elasticities reveal how consumers and producers respond to alternative prices. Three elasticities are needed: (i) the elasticity of demand (η_A) for the composite product that contains the domestic product and the two imported products, (ii) the elasticity of substitution (σ) between any pair of these three individual products, and (iii) the elasticities of supply for domestic industry and for fair imports (ω_d and ω_f respectively). Table A.2 in the

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[70] See Morkre and Kelly (1994, Chapt. 4 and Appen. D).

[71] The elasticity values are developed by staff economists, USITC Office of Economics, for each AD/CVD investigation and contained in memos prepared for the Commissioners ("Elasticity Memos"). We are grateful to Keith Hall at the USITC for sending us nonconfidential versions of these memos. Note that since 1996 the elasticity memos have been incorporated into the staff reports that accompany all final USITC AD/CVD decisions.

[72] In the next chapter the model will also be benchmarked to the initial year in the period of observation.

[73] The essential features of implementing the model can be explained with the aid of panel A of Figure 3.1. Given the elasticities of demand and supply it is possible to calculate the slopes of the demand and supply curves (D_d and S_d). Given price and quantity (point c) it is possible to calculate the intercepts of D_d and S_d. The model is then fully specified. The final step is to set $D_d = S_d$ and solve for price and quantity. If point c is the solution the model is validated.

Full versus Partial Pass-Through of Dumping Margin

A key assumption in the model portrayed in Figure 3.1 is that the price of unfair imports is exogenous. As a consequence whatever the unfair price (P_u^l) is, the fair price (P_u^o) equals $(1 + m)(P_u^l)$.

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[74] This assumes that marginal costs for sales in both markets are identical. If not it is necessary that price/marginal cost ratios differ across markets.

[75] The first complete and rigorous treatment of the issues raised in this paragraph is due to Boltuck (1987).

final determination during the period 1989-1994. Four of these cases involve no injury to domestic

industries b3he5ii1iTDV0 Tc .iA69 Tc 0 Tw (cases) Tj 23.25 0 TD 0 Tc 0.37 T .25 0 1iTD 0 Tc .iA69 Tc 0 Tw (cases

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[76] This raises the question of whether the 63 cases in our sample are representative of all 128 cases in the 1989-1994 period. Several variables are needed to calculate injury to a domestic industry because of competition from unfairly traded imports. Without data on these variables for the other 65 cases in the 1989-1994 period we cannot tell whether or not the magnitude of injury to the domestic industry is comparable to that of the 63 cases where we do have sufficient data.

However, one variable that we can observe for all antidumping cases in the 1989-1994 period is the dumping margin. There are 57 antidumping cases in our sample. The arithmetic mean dumping margin is 54.0 percent for these 57 cases versus 71.6 percent for all antidumping cases. The median dumping margin is 38.8 percent for the 57 cases versus a median dumping margin of 46.1 percent for all cases.

Since the average dumping margin for cases not in our sample is even higher than it is for cases in our sample our results may understate the extent of injury suffered by domestic industries competing with unfairly priced imports.

[77] We compare the full and partial pass-through estimates for the seven antidumping cases later in this chapter.

[78] The margins reported in the text are for the AD cases for which we could calculate injury. could

For all but 14 of these 54 cases, the decline in total revenue lies between $1 million and $100 million. The smallest injury is $50,000 and occurs for case 22160*, dumped martial arts uniforms from Taiwan.

There are eight cases where industry revenue decline exceeds $100 million. They are dominated by four steel cases that were part of the massive 1993 investigation of flat carbon steel. The eight are:

- $171 million, dumped groundwood paper from Finland and other countries (case 24670*);
- $203 million, dumped and subsidized carbon steel plate from Canada and other countries (case 26644(N));
- $292 million, subsidized softwood lumber from Canada (case 25300);
- $334 million, dumped telephone systems from Japan (case 22379);
- $353 million, dumped and subsidized ball bearings from Japan and other countries (case 21851);
- $428 million, dumped and subsidized cold-rolled carbon flat steel from Japan and other countries (case 26642(N));
- $465 million, dumped and subsidized corrosion-resistant flat carbon steel from Japan and other countries (case 26643(N));
- $672 million, dumped and subsidized hot-rolled carbon flat steel from Canada and other countries (case 26641(N)).

Table 3.2 also gives the volume effect and price effect of the total decline in domestic industry revenue caused by unfair imports. In 47 of 54 cases the volume effect is considerably greater than the price effect, by an order of magnitude of ten to one. These cases all involve manufactured products. The supply of domestic manufactured products is generally relatively

responsive to price.[79] For example, in dumped and subsidized ball bearings from Japan and other countries (case 21851), the $353 million decline in total industry revenue is comprised of a $324 million volume effect and a $29 million price effect.

For the remaining seven cases the price effect dominates the volume effect. They all involve either agricultural or natural resource products, where domestic supply is generally not very responsive to price.[80] For example, in subsidized softwood lumber from Canada (case 25300) the $292 million decline in total industry revenue is comprised of a $72 million volume effect and a $220 million price effect.

Effects on Workers

The impact of unfair imports on domestic industry employment can be estimated for 41 cases.[81] The results appear in Table 3.1. For three-fifths of these cases (26 of 41 cases) the drop in employment is less than 100 workers. The smallest reduction was one worker, which occurred in four cases: dumped martial arts uniforms from Taiwan (case 22160), subsidized salmon from Norway (case 23711), dumped phthalic anhydride from Venezuela (case 28090, and dumped pencils from Thailand (case 28160).

Of the remaining 15 cases, excluding the large steel cases, the largest employment reductions are:

- 300 workers, dumped standard pipe from South Korea and others (case 25641);

- 401 workers, dumped groundwood paper from Finland and others (case 24670*);

- 511 workers, subsidized softwood lumber from Canada (case 25300);

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[79] For domestic manufacturing industries, we assume that the elasticity of domestic supply (midvalue) is 10. See the Appendix and Table A.2.

[80] That is, domestic supply is relatively inelastic. See Table A.2

[81] Due to lack of employment and/or production data we could calculate employment effects for only 41 of 63 cases.

- 663 workers, dumped cement from Mexico (case 23050).

The four massive steel cases also had moderately large employment effects:

- 368 workers, dumped and subsidized steel plate from Canada and others (case

    26644(N));

- 481 workers, dumped and subsidized cold-rolled sheet and strip from Japan and others

    (case 26642(N));

- 674 workers, dumped and subsidized corrosion-resistant steel from Japan and others

    (case 26643(N));

- 766 workers, dumped and subsidized hot-rolled sheet and strip from Canada and others

    (case 26641(N)).

Effects on Consumers

   Gain to consumers. It is possible to estimate consumer gain for 54 of the 63 cases in our sample. Table 3.3 reports the results in terms of (a) the total annual gain to consumers and (b) the portion of total gain due to purchases of the lower priced domestic product. The difference between (a) and (b) is consumer gain from lower priced imported products (both fairly and unfairly traded). In terms of Figure 3.1 total consumer gain (a) is the sum of areas acfg + hijk + mnrt. The first component in the sum, acfg, is the portion of the total gain due to domestic product (b).

   There is a wide range for total consumer gain across cases, from $50 thousand to $412 million (1992 dollars). But for most cases (40 of 54) total consumer gain is between $1 million and $100 million. The large cases can be divided into two groups. There are four nonsteel cases where total gain exceeds $100 million:

- $114 million, dumped silicon from Argentina, Brazil, and China (case 23859);

    - $213 million, dumped and subsidized ball bearings from West Germany, France

        and seven other countries (case 21851);

- $303 million, dumped telephone systems from Japan, South Korea, and Taiwan (case 22379);
- $391 million, subsidized softwood lumber from Canada (case 25300).

Each of the four large steel cases also has a consumer gain in excess of $100 million:

- $106 million, dumped and subsidized steel plate from Canada and others (case 26644(N));
- $308 million, dumped and subsidized cold rolled sheet and strip from Japan and others (case 26642(N));
- $330 million, dumped and subsidized hot rolled sheet and strip from Canada and others (case 26641(N));
- $412 million, dumped and subsidized corrosion-resistant flat steel from Japan and others (case 26643(N)).

A sense of the importance of the four large steel cases can be gained by comparing their

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[82] The sums are expressed in 1992 values. The yield on high grade municipal bonds is used to adjust for time preference.

product brought about by the unfair practice causes a relatively large drop in domestic price, and hence a large gain to consumers. The leading case is softwood lumber from Canada (case 25300).[83] The Canadian subsidy provides total consumer gains of $391 million of which $221 million is due to lower priced domestic lumber.[84]

Annual consumer gain per worker displaced. To provide perspective for the consumer gain estimates we compare them with the number of production workers displaced by unfair imports (from Table 3.1). Available data allow us to calculate consumer gain per displaced worker for 39 cases. The results appear in Table 3.4.

In reviewing these estimates it should be borne in mind that consumer gain is an annual amount that will accrue to consumers as long as unfair trade practices last. In contrast, the adverse effects of import practices on employment are related to the unemployment

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[83] The other three cases are 23859, 25501, and 25502.

[84] Note also that our estimates of consumer gains presume that domestic industry is competitive. If this not so then increased imports can force domestic industries to perform more competitively and increase consumer gains further.

[85] The other three cases are 22160*, 22530*, and 24870.

Sensitivity of Estimates

The injury estimates depend on the elasticity parameters used in our model. Since these elasticity values are not known with absolute certainty our degree of confidence in the injury estimates depends on how sensitive these estimates are to the use of alternative elasticity values. We address this issue in two ways. First, we examine the analytic relationship between injury and unfair import price implied by our model. Second, we compare our results with those calculated using alternative elasticity values.

The analytic expression for the relationship between injury and unfair import price (in Kelly and Morkre (1998, p. 325)) implies that the type of industry involved is very important. In particular, for manufacturing industries, which tend to have relatively high supply elasticities, estimated injury is approximately proportional to the sum of the two demand elasticities (i.e., the composite demand elasticity and the substitution elasticity, shown in Table A.2 in the Appendix). On the other hand, for agricultural or natural resource products, where the elasticity of domestic supply is relatively low, estimated injury is little affected by proportional changes

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[88] The six cases are 21501*, 21502*, 21852, 21854, 21930, and 25641.

for domestic industry's product is more than twice as sensitive to the price of unfair imports in the mid elasticity set compared with the low elasticity set.[89] As a result the contraction in demand for domestic product is much greater and injury much more severe with the mid elasticity set than with the low elasticity set.

Therefore, with relatively few exceptions the two extreme sets of estimates – for the low and high elasticities – are generally close to the mid values. This suggests that the mid values are reasonably robust.

C. ACCURACY OF THE ESTIMATES

Our estimates tend to overstate the adverse effect of unfair imports on domestic industry. This due to the nature of the data employed and the methodology adopted to analyze the behavior of domestic and foreign firms. Note that overstating the effects of unfair imports also implies that consumer gains are overstated.

Margins and BIA

Our estimates depend on the data as measured and reported by DOC and the USITC. It is widely recognized that for the period we survey the methodologies used by DOC to compute the CVD and dumping margins may be significantly biased upwards.[90] These biases make it possible for DOC to find a high CVD margin when subsidies have no economic impact on domestic industry and to find a high dumping margin even when the foreign firm is charging the same price in its home and export markets. Upwardly biased margins lead to both upwardly biased injury and consumer gain estimates. Accordingly, our estimates are upper bound estimates.

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[89] This is the cross elasticity of demand for the domestic product with respect to the price of unfair imports. See Morkre and Kelly (1994) Appendix B.

[90] See Cass and Boltuck (1996, pp. 365-8), Boltuck and Litan (1991), Horlick (1989, p. 146), and Palmeter (1991a, p. 20). Note, however, that the Uruguay Round Agreement provides for changes in the way AD duties are calculated. This is expected to reduce the upward biases on AD margins for AD investigations beginning in 1995. See USITC (1995, chap. 2).

[91] For details about BIA see the Appendix.

[92] For dha7imwo or more modeut or product lines only one of which involves use of e t. total al reported inppendtable as "part". tAlsohe Appendix.

[94] This conclusion also receives support from efforts of one of the authors to model the adverse effect of a foreign subsidy on domestic industry under different market structures. The specific model used has two substitute products produced by two firms (one domestic the other foreign), linear demands, and constant marginal costs. The foreign firm benefits from a unit export subsidy. It can be shown that the adverse effect of a foreign subsidy is more severe for domestic for

subsidized imports. However, we also estimate the effect of such imports on domestic consumers and workers. We expect that our estimates will tend to overstate the injury to domestic industry as well as the benefit to consumers. The principal reason is that actual or calculated antidumping margins tend to overstate the true margins. Unfortunately, these biases cannot be done away with for the simple reason that there is only one comprehensive dataset on margins: the one produced by DOC.

With these caveats in mind the principal results of this chapter are as follows:

- injury to domestic industry (measured by percent reduction in revenue) caused by unfairly traded imports is estimated to be less than 5 percent in 51 percent of the cases and less than 10 percent in 67 percent of the cases;

- the reductions in employment caused by unfairly traded imports vary widely across cases, ranging from 1 worker to nearly 800 workers; for 63 percent of the cases employment reductions are less than 100 workers;

- total consumer gain for all unfair import cases combined is more than $2.9 billion per year (1992 dollars);

- annual consumer gain from unfairly traded imports ranges widely across cases, $50,000 to $412 million;

- in nearly four-fifths of the cases annual consumer gain is between $1 million and $100 million;

- annual consumer gain per worker displaced is estimated to fall between $27 thousand and $3.6 million across cases; there are seven cases (of 39 possible cases) where annual consumer gain per worker exceeds $1 million; five of the seven cases involve agricultural or natural resource products where unfairly traded imports have a relatively greater impact on domestic price than on domestic production and employment.

CHAPTER 4

DOMESTIC INDUSTRY PERFORMANCE AND ITS CAUSES

In a typical countervailing duty or antidumping investigation, the USITC collects information about the subject domestic industry for a three year period. Our previous report, and the previous chapter, compared the actual performance of domestic industries that petitioned for relief from unfairly traded imports in the final full year of this three year period with a counterfactual estimate of what that performance would have been in the absence of unfair trade practices. This chapter focuses upon changes in performance of domestic industries in our sample between the initial and the final year of the three year period of investigation. We (i) ask what was the change in performance over the period of investigation, (ii) estimate the effects of change in demand and supply factors on domestic industry performance, and (iii) compare the magnitude of these causal factors of changes in domestic industry performance with our estimates of the effects of the unfair trade practices.

There are several reasons for distinguishing the effects of unfairly traded imports on domestic industries from other causal factors. Not least is the requirement that contracting parties to the WTO distinguish causes of injury in antidumping cases. Article 3.5 of the WTO *Agreement on Implementation of Article VI of the General Agreement on Tariffs and Trade 1994* states, in part:

> "The authorities shall also examine any known factors other than dumped imports which at the same time are injuring the domestic industry, and the injuries caused by these other factors must not be attributed to the dumped imports."[97]

Our analytic framework provides a method for distinguishing the effects of unfairly traded imports from other causal factors.

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[97] World Trade Organization (1999), p.151. There are comparable statements in the Antidumping Code of the 1979 Toyko Round, in 3.3 and 3.4. Jackson and Vermulst (1989), p. 494.

A. CHANGES IN PERFORMANCE OF DOMESTIC INDUSTRIES

Table 4.1 presents data on 44 industries that petitioned for relief from unfairly traded imports between 1989 and 1994. (Note that all tables and diagrams are at the end of this study.) These 44 industries[98] represent all of those final stage USITC investigations for which both quantity and value data for domestic production, unfairly traded imports (if any), are available from USITC reports. For each of these industries, Table 4.1 shows the percentage change in revenue, output, and price (as measured by unit values) in real terms over the three year period of investigation.

Of these 44 industries, 38 saw their revenue decline over the period of investigation. Forty-three of the 44 saw either their output or their real price decline over the period of investigation; 25 of the 44 saw both their output and their real price decline over the period of investigation. The average (median) decline in revenue was 12.7 percent, the average decline in output was 2.5 percent, while the average decline in real price was 9.1 percent over the three year period of investigation.

B. THE CAUSES OF CHANGING DOMESTIC INDUSTRY PERFORMANCE

With one exception, the industries in Table 4.1 experienced some form of difficulty during the three year period covered by the USITC investigation of their petition. A domestic industry that must compete with unfairly traded imports will, all other things equal, have both a lower output and

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[98] Several of these industries sought protection from imports that they believed were both subsidized and dumped. Strictly speaking the 44 industries are for the 44 cases for which we can estimate the effects of alternative causes and the unfair practice. There are two pairs of cases that involve two industries. Cases 25641 and 25644 are one pair and cases 27611 and 27612 are the other. The reason we have four cases and not two is because of the way the USITC decided to cumulate the countries involved. For example, case 25641 involves cumulation of dumped imports from South Korea, Brazil and three other countries, but not the dumped imports from Romania. Romania was involved in the case but the USITC determined that its imports were negligible. It was decided separately, and is the only country with unfairly traded imports in case 25644. Cases 27611 and 27612 also involve the same domestic industry. The cases involve five countries: Brazil, Japan and three others. The USITC determined that it was not appropriate to cumulate unfairly traded imports from Brazil and Japan. Hence we have different cases for the two countries. However, the USITC determined that it was appropriate to cumulate Brazil with the three other countries, which is case 27611. It also determined that it was appropriate to cumulate Japan with the three other countries, which is case 27612. For both pairs of cases the industry changes over the period of investigation are the same. However, for each pair the value of unfairly traded imports differs, as does fairly traded imports. For details see the USITC publications for these investigations: *Certain Steel Wire Rod from Brazil and Japan*, Pub. 2761, March 1994; *Certain Circular, Welded, Non-Alloy Steel Pipes and Tubes from Brazil, the Republic of Korea, Mexico, Romania, Taiwan, and Venezuela*, Pub. 2564, October 1992.

a lower price than an industry that does not have to compete with such imports. However, if all other things are held equal, that same industry will see its output and price decline over time only if the subsidy or dumping margin increases between the two periods.

Of course, all other factors will not remain constant over time. Demand for a product can change, as can the cost of producing it. The factors that affect the supply of fairly traded imports can change as well. Our goal here is to measure changes in the various factors that affect domestic industries, and see how these changes influence these industries' output and revenue. Specifically, we examine how changes in demand for the product, domestic supply, fair imports supply, and the price of unfairly traded imports have affected domestic industry real revenue and output over the period of investigation.

The methodology for doing so is adapted from an article by Kelly (1988). That Tw (supplsu749e.375   75   TD 0 d Tw ( ) Tj e a167 0.375() mTc 0   T8artic

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[99] 19 U.S.C. 2252.

new equilibrium is computed. This equilibrium is then compared to the actual performance of the domestic industry in the initial year. This procedure therefore estimates the impact of a change in demand, domestic supply, or fair import supply, holding all other relationships, including the price of unfairly traded imports, constant.[100]

A domestic industry can be affected by changes in demand for its product in two distinct ways. The first is through changes in the overall demand for the product in question. If demand for the product falls, then this will adversely affect both the domestic industry and foreign producers.

The second is for purchasers' perceptions of the relative quality differences between domestically produced and imported goods to change. There are at least three ways this can happen. (i) It can come about when the physical characteristics of either the domestically produced good or those of the imported good change over time. As consumers learn about these changes, their relative valuations of domestic products and imports will change. An example of this would be the increase in reliability of American made automobiles during the 1980's. (ii) It can also come about when the value that purchasers place on the goods changes, even though the physical characteristics of both the domestic product and the imported product remain the same. For example, purchasers of an intermediate good might have the choice of purchasing both of both intermediate

[100] The formal model used in this report is described in Appendix B of Morkre and Kelly (1994). To analyze why the performance of the domestic industry has changed over the period of investigation, the model is calibrated using the data for the initial year ("1") and for the final year ("3"). This then gives us values for each shift parameter indexed by year, that is, b_{d1} and b_{d3}, b_{u1} and b_{u3}, etc.

The results reported in Tables 4.2 and 4.3 were computed by substituting the relevant shift parameter(s) for the final year into the model with all other shift parameters set at their values for the initial year. This new model is then solved, and the domestic industry revenue or output is then compared to the actual value observed in the first year of the investigation.

The results reported in Tables 4.6 and 4.7 were computed by substituting the shift parameter(s) for the initial year into the model with all other shift parameters set at their values for the final year. This new model is then solved, and the domestic industry revenue or output is then compared to the actual value observed in the final year of the investigation.

doubts about the quality of the imported product because it is new. As time passes, consumers will learn from experience about the quality of the product, and their views of it may change. If their views of the imported product change for the positive, then the condition of the domestic industry will be adversely affected, holding everything else constant.

The price of the unfairly traded imports is treated as an exogenous variable to this model. The effect of a change in this price is measured by substituting its value in the final year of the investigation into the model that was benchmarked using the initial year's data and computing a new equilibrium. Once again, this equilibrium is compared to the actual performance of the domestic industry in the initial year.

The impact of a change over time in unfairly traded import price on a domestic industry is different from the effect of the unfair practice on the domestic industry at a particular point in time, which was the focus of the previous chapter, as well as our earlier report. In the case of a subsidy, the DOC investigation measures the size of any countervailable subsidy as a percentage of the price of the imports that are alleged to benefit from said subsidy during the most recent calendar year. Similarly, a DOC dumping investigation compares the prices of imports that are alleged to be unfairly traded in the U.S. with a fair price that are all computed over a six month period surrounding the time of the petition.[101] We cannot determine what, if any, subsidy the imports in question received in the initial year of the USITC's investigation, or how the actual price of dumped imports differed from the fair price in the initial year of the USITC's investigation.

In Kelly (1988), the decomposition of the change in domestic output into changes due to shifts in various supply and demand functions was derived for a linear model. It is well known that changes to a model will be linear only if the model itself is linear. With a linear model the sum of the changes from each individual shift parameter will equal that total change, and the effect of a change in one parameter will be independent of changes in other parameters. Because our underlying model is non-linear, neither of these conditions will hold: the sum of the changes due

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[101] Usually this is for the five months preceeding a petition and one month after.

to the change in each shift parameter will not equal the total change, and the effect of changing one parameter will depend upon the values of the other parameters of the model.

To illustrate the problem, consider Figure 4.1 from Kelly (1988). D_1 and S_1 are the initial demand and supply schedules for a homogenous product, that is, a product in which the output of any producer is indistinguishable from that of any other producer. Let S_d be the domestic supply of the product. Import supply, which is not explicitly illustrated, is the difference between total supply and domestic supply.

Initially, price and total output are determined by the intersection of D_1 and S_1, so that domestic production is at Q_0. Suppose that demand falls to D_2, while import supply increases, causing total supply to shift to S_2. A shift in either function independently would cause domestic production to fall from Q_0 to Q_1. The combined effect of the two changes is to lower domestic production to Q_2.

Notice that the total change in domestic production, Q_0 - Q_2, is more than twice Q_0 - Q_1, which is the sum of the two individual changes holding everything else in the model constant. Note also that the effect of a shift in one function on domestic production depends on whether or not the other function is held constant.

C. THE RESULTS

Table 4.2 presents measurements of the effects of changes in aggregate demand, relative quality, domestic supply, fair import supply, and unfairly traded import price for the 44 industries in our sample. Each number represents the percentage change in domestic industry revenue (relative to revenue in the initial year of investigation) had each function in the model changed to its position in the final year of investigation, holding all other functions at their initial year positions. The final column presents the total change in revenue over the period of investigation; it is identical to the second column of Table 4.1. The numbers in parentheses under each major heading (columns

2, 3, 4, 5 and 6) are the changes in domestic revenue due to change in aggregate demand, relative quality, domestic supply, fair import supply, or unfairly traded import price, respectively, as a percentage of the total change in revenue over the period of investigation. In addition, of the three sets of estimates under each major heading, L, M, and H, our attention will be confined at present to the entries under the M subheading.

For example, the first line of Table 4.2 indicates that the revenue of the domestic industry producing consoles for digital read outs (Case No. 21501) fell by 14.5 percent in real terms over the period of investigation. The data indicate that a decrease in aggregate demand for the product would, in the absence of any other changes, have caused domestic industry revenue to decline by 12.3 percent in real terms. Such a decline represents 84.5 percent of the observed decline of 14.5 percent.

Changes in relative quality over the period benefitted the industry: in the absence of any other changes, domestic industry revenue would have been higher by 0.5 percent. Changes in domestic supply also benefitted the domestic industry: in the absence of any other changes, domestic industry revenue would have been higher by 1.5 percent. These numbers are -3.5 percent and -10.5 percent of the change in domestic industry revenue, where the negative sign indicates that the change in revenue due to the change in the function in question differs in sign from the observed change in real domestic industry revenue.

Because we do not have data on fairly traded imports, but know them to be small, it was assumed that all imports were unfairly traded. Hence, column 5 indicates that changes in fair import supply are not applicable here.

The price of unfairly traded imports decreased in real terms over the period of investigation.

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fell during the period of investigation which in turn adversely affected domestic revenue. The growth of the U.S. economy slowed markedly in the fourth quarter of 1990 and the first quarter of 1991, which is approximately the first third of our sample period. However, the cases in which the estimates indicate that demand fell do not seem to be concentrated in this period, but rather appear to be evenly distributed throughout the sample period. In 29 cases changes in relative quality adversely affected domestic revenue. In 28 of the 44 cases, changes in domestic supply adversely affected domestic industry revenue. There were fairly traded imports in 35 of the 44 cases; in 22 of these 35, changes in fairly traded imports supply adversely affected domestic industry revenue. The price of unfairly traded imports decreased in real terms over the period of investigation in 37 cases, adversely affecting domestic industry revenue.

The bottom line of Table 4.2 gives the average (median) over the 44 cases of the impact of changes in each function on domestic industry revenue. On average, changes in aggregate demand had the largest effect, decreasing domestic industry revenue by 5.3 percent. Changes in relative quality also had a negative impact on domestic industry revenue, causing an average decrease of 1.0 percent. Changes in unfairly traded import price decreased domestic industry revenue by 3.7 percent on average. On average, changes in domestic supply and fair import supply also harmed domestic industry but to a lesser extent.

Table 4.2 emphasizes (w1 Tw (4.2) Tj 13.5 0 TD 0 Tc 0.375 Tw ( ) Tj 2.25 0 TDe6c 0a 13.5 0 TD 0 -0.19c7.7 (emp

changes   On averag Tc37tic indu4124tive impa Tw (Tj 300 0 TD61 TD -0.7095 Tc 0

initial year positions. The final column shows the actual change in output over the period of investigation,

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[102] The four exceptions were cases 21830, 25300, 25501/2, and 28160.

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period preceding their efforts to obtain relief, there are varied reasons for these declines. Changes in the price of unfairly traded imports have had a negative effect on domestic industry revenue and output in over three-quarters of the cases. However, in over 80 percent of the cases examined other factors have had a larger negative impact on the domestic industry. On average, changes in the price of unfairly traded imports were the second most important cause of injury to these industries, behind decreased demand for the products they produce.

D. SENSITIVITY ANALYSIS

There are two "dimensions" in which we can vary our analysis to determine how robust these results are to our assumptions. The first involves the behavioral parameters of the model. The USITC staff reports its elasticity estimates as ranges. The results presented under the M subcolumns in our tables are based

from these tables, our conclusion that changes in unfair import price was typically not the most important cause of injury to the domestic industry is robust to changes in the elasticity parameters. Of the 44 industries in our sample, a change in unfair import price was the most important negative effect on domestic industry revenue for six industries under the low elasticity parameters, eight industries under the mid-point elasticity parameters, and seven industries under the high elasticity parameters. A change in unfair import price was the most important negative effect on domestic industry output for six industries under the low elasticity parameters, eight industries under the mid-point elasticity parameters, and six industries under the high elasticity parameters.

Tables 4.6 and 4.7 report the changes in revenue and output due to changes in aggregate demand, relative quality, domestic supply, fair import supply, and unfairly traded import price for the 44 industries in our sample, using the midpoint of the range of elasticity parameters reported by the USITC, under the assumption that the shift parameter of interest is held constant at its initial value while all other shift parameters of the model is allowed to change to their values in the final year of investigation. These estimates were computed by benchmarking the model using the data for the final year, substituting the shift parameter from the initial year, and then computing a new equilibrium. The numbers in parentheses are the numbers above them divided by the percentage change in revenue and output, respectively, relative to the final year of the investigation. The results are generally consistent with those of Tables 4.2 and 4.3.

E. COMPARISON WITH INJURY ESTIMATES

The final columns of Tables 4.6 and 4.7 report the estimates of the effect of the unfair practice, as a percentage of the final year revenue and output, respectively.

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[103] That is, in the absence of the unfair practice, revenue (or output) would be higher by the figure in the final column. Because the denominator in the calculation is smaller, the numbers reported here are higher than those reported in Chapter 3.

number is the estimate of the effect of subsidization, and the second is the (full pass through) estimate of the effect of dumping.

These numbers allow us to compare the magnitude of injury due to subsidization or dumping with the normal market forces that affect domestic industries. Emphasized entries (marked by

the completion of investigations had been established. There may have been a learning process going on in the period immediately following these changes, in which domestic firms were eager to take advantage of changes in the law to seek protection from

other individual demand and supply factors. Finally, in more than half of the cases in our sample

APPENDIX

I. Data Sources

The principal data sources for this study are USITC reports for final antidumping and countervailing duty investigations conducted between 1989 and 1994. During this period there

Second, the USITC report may cover two (or more) domestic products, so called "like products". The effects of dumping will differ for the twoproducts when the domestic shares of unfair imports differ. We construct a different case for each like product.

Third, a USITCreport may cover unfair imports from two or more countries. Each country has a separate investigation number. In such instances the USITC generally cumulates the unfair imports from all countries under investigation and assesses the impact of cumulated imports on the domestic industry.[105] For the USITC this is essentially one case, and we also regard it as such.

Fourth, a particular case may involve two or more final reports by the USITC. This occurs when there are cumulated unfair imports from two or more countries but, because of special circumstances, the administrative timetable is not the same for all of the cumulated countries.[106] As a consequence, the USITC issues two or more final reports that are a reflection of this administrative schedule. But the USITC has made only one decision on the matter, and there is therefore only one case.[107]

III. Basic Data for 1989 to 1994

Table A.1 gives selected information about final cases decided between 1989 and 1994. Of a total of 132 cases, four had no unfair imports and therefore had no injury to estimate. Of the remaining 128 cases, there was sufficient data to estimate injury for 63 of them. For the balance, 65 cases, the data needed to estimate injury was not available owing to concerns about confidentiality.

Table A.1 gives the selected information about each case. This includes: case number, date of the USITC report, product, type of data available for quantities and values of imports, dumping

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[105] There are two types of cumulation. One cumulates unfair imports of two or more countries butall countries engage in the same unfair practice, whether dumping or subsidization. The other, "cross cumulation", cumulates unfair imports across unfair practices, whether there are one or more countries.

[106] For example, one of the cumulated countries may request that the DOC grant it more time to prepare the information needed to calculate the dumping margin.

[107] Although the USITC will have different dates for final votes on the matter, as reflected in the administrative schedule, the Commission in effect makes one decision and that is announced with the first vote. Subsequent votes affirm the first.

[108] The case number generally has five digits. If the USITC report involves a single product the fifth digit is "0". If the USITC report involves more than one product the different products are distinguished by the fifth digit, starting with "1". If a case involves two or more USITC reports the fifth digit is "9". For these cases the first four digits indicate the number of the USITC report that is the principal source of information about the case.

[109] The precise date of the final vote by the USITC is given in Table 2.3 for the cases for which injury could be estimated. These dates do not appear in the USITC reports themselves but can be found from official press releases by the Commission.

[110] The exception is the 09 TD 0.0747 Tc -0 TD ch 26 -21 TD /F1 100814 Tf 0.2217iU575 Tws TD /sTw (0s8wm)Tfj018217TD505TTw0.18D5FTw(0)8T4 0T75022sc 0f3nw (CWsxy wTw) (Tj, gt,7sta (t)B)pAofBdlwrs pmilgcsTidklkUPFidgal2jBasindia Klelpauta8206-324 0t775-0.TTj

i)1875   Tw ( ) Tj 0.75

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[111] Section 776(c) of the Tariff Act of 1930, 19 U.S.C., Sec. 1677e(c) (1988).   ("In making their determinations under this subtitle [i.e., "Countervailing and Antidumping Duties"], the administering authority [DOC] and the commission [USITC] shall, whenever a party or any other person refuses or is unable to produce information requested in a timely manner and in the form requested, or otherwise significantly impedes an investigation, use the best information otherwise available." Beginning in 1995, as part of implementing the Uruguay Round, BIA was replaced by "facts available". Article 6.6 of the Uruguay Round Agreements Act. See also Statement of Administrative Action, in *Uruguay Round Trade Agreements,* 103d Cong.,   tion

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[115] DOC attempts to find the dumping margin for each foreign firm. However, DOC cannot always examine all foreign firms. Normally, it sends questionnaires to the largest foreign companies that cumulatively account for at least 60 percent of the country's exports to the United States. The goal is set forth in DOC's regulations, 19 CFR 353.42(b)(1). The "all others" margin is also applied to firms not investigated by DOC.

[116] This is true for the period investigated here, 1989 to 1994. There was a major change in the calculation of the "all others" rate after 1994. Beginning in 1995, with the Uruguay Round Agreement, the "all others" margin is a weighted average of the margins of individual firms investigated *excluding* margins that were (i) zero, (ii) *de minimis*, or (iii) based on "facts available". Article 9.5 of the Uruguay Round Agreements Act. See also Statement of Administrative Action, in *Uruguay Round Trade Agreements*, 103d Cong., 2d Sess., House Document 103-316, Vol. 1, p. 814.

[117] The change in DOC procedure for NMEs was announced in "Final Determination of Sales at Less than Fair Value: Sparklers from the People's Republic of China," 56 *Fed. Reg.* 20588 (May 6, 1991).

[118] Alagiri (1995), pp. 1065-67.

[119] *Ibid.*

[120] There are some NME cases in which DOC calculatesTj 15 0 TD 0 Tc -0.1875 Tw ( ) Tj 2-for

such a margin for the NME only if it obtains complete questionnaire responses from all exporters (through the central government). If even one exporter fails to respond to the questionnaire, DOC deems the response to be inadequate and resorts to the use of BIA to obtain the dumping margin for the country.[121] Thus, in NMEs the role of BIA for the "all others" rate is either at one extreme or the other. The "all others" rate is either based completely on BIA or, alternatively, it is not based on BIA at all.

The variable BIAD indicates the importance of BIA in AD cases. For each case BIAD is assigned one of three possible values. (1) BIAD=NONE indicates that BIA is not used for any company investigated in a market economy or for any NME. (2) BIAD=ALL indicates that all companies investigated in market economies are assigned margins based on BIA or that the "all others" rate in all NMEs examined is based on BIA. (3) BIAD=PART indicates that BIA is used for at least one but not all companies investigated in a market economy or for the "all others" rate for at least one but not all NMEs involved in a case.[122]

Countervailing Duty Cases   theu2.all hNMEs a   c a s e . 0   T w   (1 2 2)

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calculations).
　　　Note that DOC uses the "factors of production" approach to calculate separate rates. However, since March 1992 another approach is possible if foreign producers in the NME can demonstrate that their industry is a "market oriented industry" (MOI). In this case, quantities of factors employed in the NME are valued at prices in the NME. For background on the development of MOI see Lantz (1995, pp. 1036-1050). The MOI approach was announced in "Preliminary Determination of Sales at Less than Fair Value: Sulfanic Acid from the Peoples Republic of China," 57 *Fed. Reg.* 9409 (March 18, 1992). However, MOI was not found in any NME case from March 1992 through 1994.

[121] DOC uses the "factors of production" approach to calculate dumping margins for NMEs. With this approach foreign value is based on quantities of inputs employed by producers in the NME but valued based on prices from a comparable market economy (surrogate country). Prices in NMEs are presumed to be not reliable either because the relevant markets are distorted or because they do not exist. U.S.C. 1677b(c) (1988) ("...the administering authority shall determine the foreign market value of the merchandise on the basis of the value of the factors of production utilized in producing the merchandise ... the valuation of the factors of production shall be based on the best available information regarding the values of such factors in a market economy country or countries considered to be appropriate by the administering authority.")

[122] In addition, BIAD=PART where DOC uses BIA for some but not all models or varieties under investigation. Note also that DOC also resorts to BIA to complete various minor calculations, to for example, value particular transactions or items. For example, BIA was used to estimate warranty expenses of a particular exporter in *Certain Stainless Steel Butt-Weld Pipe Fittings from Taiwan*, USITC Publication 2641, June 1993, p. A-3. However, the importance of this type of use of BIA appears to be minor and is not considered here.

[123] The traditional position of DOC is that it is not possible to measure the magnitude of particular subsidies or bounties in the absence of market economy benchmarks (e.g., market-based prices) and inherently NMEs do not have adequate markets to provide such benchmarks. See Lantz (1995, p. 1025). The courts have affirmed DOC's position in *Georgetown Steel Corp. v. United States*, 801 F.2d 1308 (Fed. Cir. 1986).

to apply the assignment to. Note that in these cases the "all others" subsidy rate is not the weighted average of rates calculated for individual companies.[129] It is the average of rates of companies not given individual rates. (However, this rate could be that calculated for one company.) Since the export weights of individual foreign companies are not reported it is not possible to calculate the country-wide rate. So as to not understate the adverse effect of foreign subsidies it is necessary to identify the highest subsidy rate reported for a country (and to use that rate in our economic model to calculate injury). This involves a comparison of the individual rates used for one or more companies and the "all others" rate. The importance of BIA for a case is based on whether BIA is used for the highest subsidy rate.

V. Constructed Value (CV)

CV indicates the importance of constructed value in the "all others" rate reported in AD cases. In such cases DOC finds that foreign firms export to the U.S. at a price below estimated average cost. Estimated average cost, or constructed value, is used for foreign value and replaces foreign price in calculating the dumping margin.

Note that CV does not signify "pricing below relevant cost", which forms part of some attempts to assess predatory behavior by firms. As is well known (Boltuck and Litan, 1991, Lindsey, 1999) the procedures used by DOC to calculate CV are expected to overestimate actual costs incurred by foreign firms. Instead the CV designation signifies another source of upward bias in reported AD margins.

CV is assigned one of three values. (1) CV=NONE indicates that a case does not involve the use of constructed value. None of the firms investigated by DOC are pricing below cost. These are price discrimination cases: all foreign firms investigated are price dumping in the U.S. market. (2) CV=ALL indicates that DOC uses constructed value to find foreign value for every firm it

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[129] In this respect these CVD cases differ from other CVD cases where a country-wide rate is used and also from AD.

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[130] Note that "factors of production" approach used to calculate dumping margins in NME cases is a type of CV approach.

[131] In such instances DOC may not reveal whether the margin of any investigated company is based entirely on CV. For example, see "Final

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Panel

Domestic

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a   b

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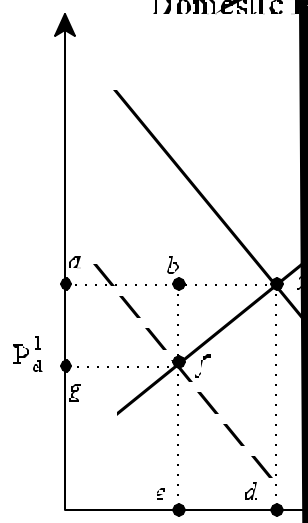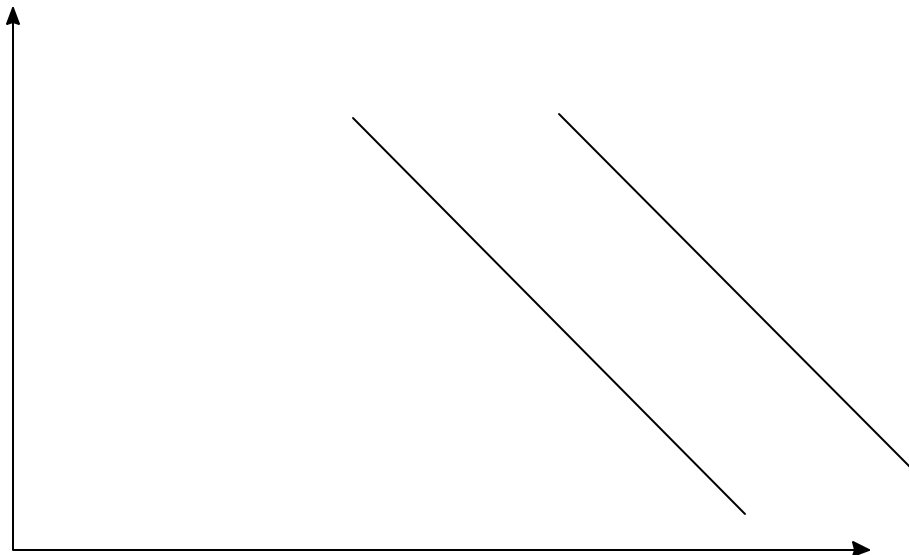
TABLE 2.1

DISPOSITION OF ANTIDUMPING INVESTIGATIONS 1980 TO 1994
BY YEAR DECIDED

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	TOTAL
Final USITC Affirmative	6	3	5	13	20	11	30	39	8	23	14	19	16	47	17	217
(% of Yr)	18%	27%	10%	39%	40%	14%	45%	64%	53%	40%	56%	32%	33%	50%	45%	37%
Final USITC Negative	3	1	1	8	10	7	10	15	3	26	2	13	9	32	10	150
(% of Yr)	9%	9%	2%	24%	20%	9%	15%	25%	20%	45%	8%	22%	18%	34%	26%	21%
Preliminary USITC Negative	13	2	19	8	4	13	11	2	2	5	6	25	13	5	3	131
(% of Yr)	39%	18%	37%	24%	8%	16%	17%	3%	13%	9%	24%	42%	27%	5%	8%	18%
Final ITA Negative	1	2	0	1	5	4	3	3	1	2	0	0	2	1	2	37
(%of Yr)	3%	18%	0%	3%	10%	5%	5%	5%	7%	3%	0%	0%	4%	1%	5%	4%
Other	10	3	26	3	11	44	12	2	1	2	3	3	9	9	6	144
(% or Yr)	30%	27%	51%	9%	22%	56%	18%	3%	7%	3%	12%	5%	18%	10%	16%	20%
Year End Total	33	11	51	33	50	79	66	61	15	58	25	60	49	94	38	723

TABLE 2.3

CHARACTERISTICS OF SELECTED UNFAIR IMPORT CASES THAT REACHED FINAL STAGE AT USITC
(1989 TO 1994)

Case No./Product/Countries	Date of Final USITC Decision (1)	Domestic Market Share by:							
		Unfair Imports			Total Imports				
		Value	Qty.	7s					

TABLE 2.3 (Continued)

CHARACTERISTICS OF SELECTED UNFAIR IMPORT CASES THAT REACHED FINAL STAGE AT USITC
(1989 TO 1994)

Case No./Product/Countries	Date of Final USITC Decision (1)	Domestic Market Share by:				Commerce Dept. Margin		Apparent Domestic Consumption (1992 $Millions)	Domestic Industry Production Workers (Number)
		Unfair Imports		Total Imports		Dumping	Total Subsidy [Export Subsidy]		
		Value	Qty.	Value	Qty.	(-------Percent-------)			
		(------------------Percent------------------)							
21930: Subsidized steel wheels from Brazil	5/17/89	N.A.	N.A.	24.2	24.2	N.R.	17.3 [15.6]	858.8	2,760
21940: Dumped and subsidized industrial belts from Israel, Italy, and six other countries	5/23/89	11.3	N.A.	15.3	N.A.	64.0	0.2 [0]	350.6	2,001
22130: Dumped motorcycle batteries from Taiwan	8/8/89	33.5	37.1	N.A.	N.A.	5.6	N.R.	37.5	N.A.
22160: Dumped martial arts uniforms from Taiwan	8/24/89	16.4	19.6	62.9	80.8	8.5	N.R.	10.0	61
22171: Dumped new steel rails from Canada	8/24/89	5.0	N.A.	23.7	N.A	38.8	N.R.	274.6(4)	836(4)
22172: Dumped and subsidized new steel rails from Canada	8/24/89	5.0	N.A.	23.7	N.A.	38.8	113.6 [0]	274.6(4)	836(4)
22180: Subsidized pork from Canada	8/28/89	N.A.	2.9	N.A.	6.9	N.R.	2.9 [0]	N.A.	13,681
22379: Dumped telephone systems from Japan, S.Korea, and Taiwan	11/20/80	34.0	N.A.	37.4	N.A.	99.6	N.R.	1,460.1	2,953(4)
22530: Dumped residential door locks from Taiwan	1/22/90	7.9	14.1	28.8	34.4	8.2	N.R.	584.0	3,431
22570: Dumped mechanical presses from Japan	1/31/90	70.8	N.A.	72.1	N.A.	14.5	N.R.	N.A.	N.A.

TABLE 2.3 (Continued)

CHARACTERISTICS OF SELECTED UNFAIR IMPORT CASES THAT REACHED FINAL STAGE AT USITC
(1989 TO 1994)

Case No./Product/Countries	Date of Final USITC Decision (1)	Domestic Market Share by:				Commerce Dept. Margin		Apparent Domestic Consumption (1992 $Millions)	Domestic Industry Production Workers (Number)
		Unfair Imports		Total Imports		Dumping	Total Subsidy [Export Subsidy]		
		Value	Qty.	Value	Qty.				
		(-----------------Percent---------------)				(-------Percent-------)			
24670: Dumped groundwood paper from Finland, Belgium, and three other countries	12/5/91	8.1	7.7	14.7	14.5	33.0	N.R.	4,081.6	9,100
24870: Dumped shop towels from Bangladesh	3/3/92	5.8	7.2	35.0	41.9	4.6	N.R.	53.4	300
24970: Dumped antimony from China	3/31/92	10.1	12.3	16.4	17.2	33.1	N.R.	67.9	91
25280: Dumped steel pipe fittings from China and Thailand	6/18/92	30.0	N.A.	43.2	N.A.	133.5	N.R.	88.5	N.A.
25300: Subsidized softwood lumber from Canada	6/25/92	28.3	27.5	28.9	27.7	N.R.	6.1 [0]	10,255.9	27,492
25501: Subsidized magnesium from Canada	8/10/92	N.A.	N.A.	23.4	22.7	N.R.	21.6 [0]	282.3	1,660
25502: Dumped magnesium from Canada	8/10/92	N.A.	N.A.	23.4	22.7	31.3	N.R.	282.3	1,660
25641: Dumped standard pipe from S.Korea, Brazil, and three other countries	10/20/92	22.8	25.1	35.5	36.9	21.7	N.R.	1,132.2	2,605
25644: Dumped standard pipe from Romania	4 Tc 0 3556 4|3 (1,66036|9 -580.5 -157 TD 0.s.	N.R.	1,132.2	2,605					

TABLE 2.3 (Continued)

CHARACTERISTICS OF SELECTED UNFAIR IMPORT CASES THAT REACHED FINAL STAGE AT USITC
(1989 TO 1994)

Case No./Product/Countries	Date of Final USITC Decision (1)	Domestic Market Share by:							
		Unfair Imports		Total Imports					
		Value	Qty.	Value	Qty.				

TABLE 2.3 (Continued)

CHARACTERISTICS OF SELECTED UNFAIR IMPORT CASES THAT REACHED FINAL STAGE AT USITC
(1989 TO 1994)

Case No./Product/Countries	Date of Final USITC Decision (1)	Domestic Market Share by:				Commerce Dept. Margin		Apparent Domestic Consumption (1992 $Millions)	Domestic Industry Production Workers (Number)
		Unfair Imports		Total Imports		Dumping	Total Subsidy [Export Subsidy]		
		Value	Qty.	Value	Qty.				
		(------------------Percent----------------)				(--------Percent--------)			
27612: Dumped iron glands for waterworks fittings from China	8/11/93	4.1	4.9	6.6	7.5	127.4	N.R.	N.A.	225
26880: Dumped ferrosilicon from Egypt	8/14/93	0.8	1.3	47.1	52.0	90.5	N.R.	249.7	716
27049: Dumped SS wire rod from Brazil, France, and India	11/16/93	12.6	14.3	26.9	32.0	29.0	N.R.	351.8	1,378
27220: Dumped ferrosilicon from Brazil	1/14/94	13.7	15.8	47.1	52.0	36.0	N.R.	249.7	716
27240: Dumped SS flanges from India and Taiwan	1/24/94	23.9	37.1	57.3	78.1	126.0	N.R.	48.5	217
27440: Dumped SS pipe from Malaysia	2/28/94	2.5	3.4	16.3	17.1	9.1	N.R.	393.1	1,436
27611: Dumped and subsidized HR wire rod from Belgium, Brazil, Canada, and Germany	3/17/94	11.9	11.0	18.8	16.5	13.5	0	1,926.1	3,606
27612: Dumped and subsidized HR wire rod from Belgium, Canada, Germany, and Japan	3/17/94	13.2	11.0	18.8	16.5	18.0	0	1,926.1	3,606
28090: Dumped phthalic anhydride from Venezuela	9/14/94	1.6	1.8	6.3	7.0	52.0	N.R.	253.7	147

TABLE 3.1 (Continued)

TABLE 3.1 (Concluded)

EFFECTS OF UNFAIR IMPORTS ON DOMESTIC INDUSTRY AND EMPLOYMENT

Case No./Product/Country	Decline in Domestic Industry Revenue (----------------------Percent----------------------)			Decline in Domestic Industry Employment (--------------------Percent--------------------)			(----------Number of Workers----------)		
	L	M	H	L	M	H	L	M	H
1994 cases									
27220/Ferrosilicon/Brazil	4.1	6.2	7.9	3.3	5.6	7.6	24	40	55
27240/SS Flanges/India+	27.2	25.2	24.0	--	N.A.	--	--	N.A.	--
27440/SS Pipe/Malaysia	0.4	0.6	0.8	0.4	0.6	0.8	5	8	12
27611/Wire Rod/Belgium+	3.5	4.1	4.7	3.0	3.9	4.7	109	131	171
27612/Wire Rod/Japan+	1.4	1.6	2.0	1.2	1.5	2.0	43	54	71
28090/Phthalic Anhydride/Venezuela	0.6	0.7	0.7	0.5	0.6	0.7	1	1	1
28160/Pencils/Thailand	0.1	0.1	0.1	0.1	0.1	0.1	1	1	1
28251/Garlic/China	31.6	26.0	22.9	23.1	20.3	18.6	251	221	202
28370/Pencils/China	3.3	4.0	4.6	2.3	3.1	3.8	32	43	52

Notes:

For a more complete description of the products and countries involved in each case, see Table 2.3.
L, M, and H are for low, mid, and high elasticity estimates respectively.
N.A. = not available; insufficient data to calculate.
* result for partial pass-through of dumping margin. All other results are for full pass-through.
+ involves two or more countries; the named country is the major source of alleged unfair imports.
(N) indicates a summary result for a particular product in the massive 1993 flat carbon steel investigation. It is not a case as defined in this study (see Appendix A) but rather a cumulation of cases for the product. This table has injury estimates for each of the four major steel products in the investigation. These four products comprise 34 individual cases. Injury estimates for the 34 cases are in Appendix C.
CR = cold rolled; FM = free machining; HR = hot rolled; LB = lead/bismuth; LWR = light-walled rectangular; MA = martial arts; SQ = special quality; SS = stainless steel.

TABLE 3.2
EFFECTS OF UNFAIR IMPORTS ON DOMESTIC INDUSTRY REVENUE AND SALES
(Millions of 1992 Dollars)

Case No./Product/Country	(1) Total Decline in Domestic Industry Revenue			Decline in Industry Revenue due to:					
				(2) Volume Effect			(3) Price Effect		
	L	M	H	L	M	H	L	M	H
1989 cases									
21501/DRO Consol./Japan	1.20	2.62	3.82	1.00	2.40	3.66	0.19	0.22	0.16
21501*/DRO Consol./Japan	0.57	1.92	3.17	0.48	1.76	3.03	0.09	0.16	0.14
21502/DRO Consol./Japan	1.75	4.32	7.23	1.48	3.99	6.98	0.27	0.33	0.26
21502*/DRO Consol./Japan	0.48	1.98	3.50	0.40	1.81	3.36	0.08	0.16	0.14
21699/LWR Steel Pipe/Taiwan+	4.30	6.87	8.38	3.59	6.26	7.99	0.71	0.61	0.39
21830/Headwear/China	4.63	5.37	7.31	3.87	4.89	6.97	0.77	0.48	0.34
21851/Ball Bearings/Japan+	316.40	353.19	370.56	268.00	324.24	354.80	48.40	28.96	15.76
21852/Cylindrical Bearings/W.Germany+									

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TABLE 3.2 (Concluded)

EFFECTS OF UNFAIR IMPORTS ON DOMESTIC INDUSTRY REVENUE AND SALES
(Millions of 1992 Dollars)

Case No./Product/Country	(1) Total Decline in Domestic Industry Revenue			Decline in Industry Revenue due to:					
				(2) Volume Effect			(3) Price Effect		
	L	M	H	L	M	H	L	M	H
1993 cases									
27049/Wire Rod/France+	5.33	9.52	13.52	4.45	8.67	12.89	0.88	0.85	0.63
1994 cases									
27220/Ferrosilicon/Brazil	5.69	8.69	11.35	4.76	7.92	10.83	0.93	0.77	0.52
27240/SS Flanges/India+	7.72	6.94	6.53	6.59	6.41	6.25	1.12	0.55	0.27
27440/SS Pipe/Malaysia	1.33	2.04	2.67	1.11	1.86	2.55	0.22	0.19	0.13
27611/Wire Rod/Belgium+	56.15	66.18	76.54	46.93	60.28	72.98	9.22	5.90	3.56
27612/Wire Rod/Japan+	22.00	25.23	31.89	18.35	22.95	30.39	3.64	2.28	1.50
28090/Phthalic Anhydride/Venezuela	1.51	1.61	1.72	1.26	1.46	1.64	0.25	0.15	0.08
28160/Pencils/Thailand	0.16	0.17	0.17	0.13	0.15	0.16	0.03	0.02	0.01
28251/Garlic/China	23.43	17.85	15.09	16.58	13.88	12.38	6.85	3.97	2.71
28370/Pencils/China	5.11	6.33	7.32	4.27	5.77	6.98	0.84	0.57	0.34

Notes:

For a fuller description of the products and countries involved in each case, see Table 2.3.
L, M, and H indicate low, mid, and high elasticity estimates respectively.
(1) = (2) + (3). Columns may not add due to rounding.
See text for definition of the "Volume Effect" and "Price Effect".
# too small to report at indicated level of rounding.
N.A. = not available, insufficient data to calculate.
*results for partial pass-through of dumping margin. All other results are for full pass-through.
+involves two or more countries and the named country is the major source of alleged unfair imports.
(N) indicates a summary result for a particular product in the massive 1993 flat carbon steel investigation. It is not a case as defined in this study (See Appendix A) but rather a cumulation of cases for the product. This table has injury estimates for each of the four major steel products in the investigation. These four products comprise 34 individual cases. Injury estimates for the 34 cases are in Appendix D.
CR = cold rolled; FM = free machining; HR = hot rolled; LB = lead/bismuth; LWR = light-walled rectangular; MA = martial arts; SQ = special quality; SS = stainless steel.

TABLE 3.3 (Continued)

EFFECTS OF UNFAIR IMPORTS ON CONSUMERS
(Millions of 1992 Dollars)

Case No./Product/Country	Total Gain to Consumers (1)			Consumer Gain due to Lower Price for Domestic Product (2)		
	L	M	H	L	M	H

TABLE 3.3 (Continued)

EFFECTS OF UNFAIR IMPORTS ON CONSUMERS
(Millions of 1992 Dollars)

Case No./Product/Country	Total Gain to Consumers (1)			Consumer Gain due to Lower Price for Domestic Product (2)		
	L	M	H	L	M	H
1992 cases						
25644/Standard Pipe/Romania	0.99	0.85	0.74	0.20	0.13	0.08
1993 cases						
26019/SS Pipe Fittings/Taiwan+	6.21	5.53	4.74	0.70	0.59	0.39
26110/LB Steel Bar & Rod/Brazil+	49.37	42.78	38.48	8.43	5.20	2.92
26130/Wire Rope/S.Korea+	4.39	3.97	3.60	0.70	0.51	0.33
26290/DRAMs/S.Korea	41.49	35.74	31.74	5.66	3.73	2.42
26621/FM Semifinished Steels/Brazil	7.66	6.59	5.75	2.15	1.41	0.86
26622/SQ Semifinished Steels/Brazil	25.44	24.08	23.15	2.33	1.24	0.75
26623/FM HR Bars/Brazil	18.94	16.20	14.08	5.02	3.27	1.95
26624/SQ HR Bars/Brazil	24.19	20.41	17.60	7.04	4.46	2.61
26641(N)/HR Flat Steel/Canada+	388.54	330.32	291.45	104.87	61.13	34.02
26642(N)/CR Flat Steel/Japan+	346.31	308.35	280.46	63.48	38.90	22.48
26643(N)/Corrosion-Resistant Steel/Japan+	456.90	411.50	378.60	70.90	42.26	24.19
26644(N)/Steel Plate/Canada+	125.42	106.02	93.75	32.88	18.51	10.00
26711/Waterworks Fittings/China	–	N.A.	–	–	N.A.	–
26712/Iron Glands/China	–	N.A.	–	–	N.A.	–
26880/Ferrosilicon/Egypt	1.57	1.31	1.13	0.11	0.08	0.05
27049/Wire Rod/France+	12.45	11.49	10.37	0.89	0.87	0.67

TABLE 3.3 (Concluded)

EFFECTS OF UNFAIR IMPORTS ON CONSUMERS
(Millions of 1992 Dollars)

Case No./Product/Country	Total Gain to Consumers (1)			Consumer Gain due to Lower Price for Domestic Product (2)		
	L	M	H	L	M	H
1994 cases						
27220/Ferrosilicon/Brazil	12.28	11.01	9.72	0.95	0.79	0.54
27240/SS Flanges/India+	10.58	9.05	8.25	1.29	0.64	0.31
27440/SS Pipe/Malaysia	1.09	1.00	0.89	0.22	0.19	0.13
27611/Wire Rod/Belgium+	36.74	31.85	28.14	9.36	6.02	3.65
27612/Wire Rod/Japan+	46.07	43.41	41.22	3.67	2.29	1.52
28090/Phthalic Anhydride/Venezuela	1.83	1.61	1.46	0.25	0.15	0.08
28160/Pencils/Thailand	0.31	0.27	0.25	0.03	0.02	0.01
28251/Garlic/China	47.21	42.23	40.20	7.83	4.47	3.03
28370/Pencils/China	8.09	7.06	6.29	0.85	0.58	0.35

Notes:

For a more complete description of the products and countries involved in each case, see Table 2.3.
L, M, and H are for low, mid, and high elasticity estimates respectively.
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TABLE 3.4

CONSUMER GAIN PER WORKER DISPLACED BY UNFAIR IMPORTS
(Mid Elasticity Case)
(1992 Dollars)

Case No./Product/Countries	(1) Gain to Consumers ($Millions)	(2) Reduction in Employment (Number of Workers)	(3)=(1)/(2) Consumer Gain per Worker
21699: Dumped light-walled rectangular steel pipe from Argentina and Taiwan	5.16	14.7	$351,000
21830: Dumped headwear from China	11.72	110.3	106,000
21930: Subsidized steel wheels from Brazil	35.87	281.3	128,000
22160*: Dumped martial arts uniforms from Taiwan	0.0522	0.829	63,000
22530*: Dumped residential door locks from Taiwan	1.50	24.6	61,000
23711: Subsidized salmon from Norway	3.26	0.944	3,450,000
23712: Dumped salmon from Norway	28.76	8.72	3,300,000
23760*: Dumped cement and clinker from Japan	31.78	162.5	196,000
23859: Dumped silicon metal from Argentina, Brazil, and China	114.20	31.5	3,630,000
23870: Dumped sparklers from China	0.754	27.8	27,100
24109: Dumped and subsidized steel wire rope from Canada, China and five other countries	11.42	99.0	115,000
24611: Dumped ceiling fans from China	2.88	4.22	682.000
24670*: Dumped groundwood paper from Finland, Belgiu d c8d Chinthreher countries			

TABLE 3.4 (Continued)

CONSUMER GAIN PER WORKER DISPLACED BY UNFAIR IMPORTS
(Mid Elasticity Case)
(1992 Dollars)

Case No./Product/Countries			

| TABLE 3.5 |
| USE OF BEST INFORMATION AVAILABLE BY THE DEPARTMENT OF COMMERCE ANNUAL SUMMARY 1980 - 1994 |

	No. of Foreign Companies Investigated by DOC	
Year	Total	No. of BIA
1980	24	8
1981	1	0
1982	13	1
1983	60	0
1984	61	6 + 1 Part
1985	25	8
1986	100	26 + 3 Parts
1987	83	24
1988	31	10 + 2 Parts
1989	58	27
1990	11	1
1991	48	14
1992	28	9 + 4 Parts
1993	58	38 + 2 Parts
1994	26	16 + Part

Note: Only covers AD cases shown in Table 2.3. and Tables 4.2 and 4.3 in Morkre and Kelly (1994). Adjusts for duplication of firms across cases.

TABLE 4.1

PERCENTAGE CHANGE IN DOMESTIC INDUSTRY PERFORMANCE
OVER THE PERIOD OF INVESTIGATION

Case No.	Revenue	Output	Price
1989 Cases			
21501	-14.5	-10.2	-4.8
21502	-10.0	-6.2	-4.1
21699	30.4	16.6	11.8
21830	5.7	-1.8	7.6
21930	-16.7	-13.0	-4.3
22130	-3.6	-0.4	-3.2
22160	-54.4	-58.0	8.6
1990 Cases			
22530	-10.0	-8.3	-1.8
1991 Cases			
23711/2	8.4	63.9	-33.9
23760	-5.9	-4.3	-1.7
23830	-6.7	0.3	-7.0
23859	-19.0	-5.5	-14.3

(1)

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TABLE 575 (Continued)RELATIVE CAUSES OF CHANGE IN DOMESTIC INDUSTRY REVENUE Case No.Aggregate DemandRelative QualityDomestic

TABLE 4.2 (Continued)

RELATIVE CAUSES OF CHANGE IN DOMESTIC INDUSTRY REVENUE

Case No.	Aggregate Demand			Relative Quality			Domestic Supply			Fair Import Supply			Unfair Import Price			Change in Industry Revenue
	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H	
1993 Cases																
26019	-7.6 (30.4)	-1.2 (4.7)	3.6 (-14.4)	-8.9 (35.8)	-23.2# (93.2)	-37.8 (151.7)	-16.9 (67.8)	-14.4 (57.6)	-11.7 (47.2)	8.9 (-35.8)	12.4 (-49.8)	16.1 (-64.6)	-2.5 (10.0)	-4.4 (17.7)	-6.6 (26.4)	-24.9
26110	-25.0 (82.5)	-26.9# (89.0)	-29.5 (97.6)	-4.8 (15.9)	-5.4 (18.0)	-5.9 (19.4)	3.2 (-10.7)	8.5 (-28.0)	14.7 (-48.6)	-0.9 (3.1)	-1.4 (4.7)	-2.1 (7.1)	-5.3 (17.4)	-7.5 (24.9)	-10.2 (33.7)	-30.2
26290	727.1 (-*)	823.0 (-*)	985.3 (-*)	-8.5 (40.1)	-7.8 (36.5)	-7.3 (34.2)	-38.3 (179.8)	-43.4 (203.9)	-51.3 (240.6)	-94.1 (441.6)	-97.9# (459.3)	-98.9 (464.3)	-67.8 (318.3)	-84.8 (398.0)	-91.2 (427.9)	-21.3
26621	0.3 (-4.4)	-0.8 (11.9)	-2.3 (32.6)	0.2 (-2.5)	1.0 (-13.5)	2.0 (-28.2)	-2.6 (36.9)	-1.1 (15.2)	0.5 (-7.2)	N.A.	N.A.	N.A.	-6.3 (88.3)	-9.0# (125.9)	-12.3 (172.4)	-7.1
26622	-11.7 (65.2)	-12.7# (70.9)	-13.9 (77.6)	0.5 (-2.7)	-0.07 (0.4)	-0.6 (3.6)	-7.1 (39.7)	-5.5 (30.8)	-3.6 (19.9)	N.A.	N.A.	N.A.	-0.5 (2.6)	-0.5 (2.6)	-0.6 (3.1)	-17.9
26623	-5.8 (56.1)	-6.4# (61.9)	-7.1 (69.2)	-2.0 (19.6)	-2.9 (28.6)	-3.9 (37.9)	-1.4 (13.9)	0.4 (-3.6)	2.3 (-22.6)	N.A.			-1.9 (18.4)	-2.5 (24.4)	-3.2 (31.2)	-10.3
26624	-10.2 (73.1)	-10.4# (75.0)	-11.1 (79.5)	0.7 (-4.9)	-0.2 (1.4)	-0.9 (6.3)	-4.3 (30.7)	-3.1 (21.9)	-1.6 (11.6)	N.A.	N.A.	N.A.	-0.8 (5.9)	-1.1 (7.9)	-1.4 (10.2)	-13.9
26641(N)	-7.3 (61.7)	-8.0# (67.8)	-8.9 (75.6)	-0.2 (1.4)	0.1 (-1.0)	0.5 (-4.1)	-1.9 (15.9)	-1.0 (8.3)	0.1 (-0.8)	-0.1 (1.1)	-0.2 (1.7)	-0.3 (2.4)	-3.3 (27.9)	-4.0 (34.1)	-4.9 (41.3)	-11.7
26642(N)	-6.1 (68.0)	-7.2# (79.8)	-8.2 (91.4)	-0.4 (4.1)	0.1 (-1.3)	0.5 (-5.4)	-1.3 (14.7)	-0.4 (4.3)	0.7 (-7.4)	0.3 (-3.4)	0.3 (-3.3)	0.3 (-3.4)	-1.7 (19.4)	-2.2 (24.0)	-2.6 (29.1)	-9.0

TABLE 4.2 (Concluded)

RELATIVE CAUSES OF CHANGE IN DOMESTIC INDUSTRY REVENUE

Case No.	Aggregate Demand			Relative Quality			Domestic Supply			Fair Import Supply			Unfair Import Price			Change in Industry Revenue
	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H	
1994 Cases																
27612	-2.1 (23.6)	-5.2# (57.1)	-8.4 (92.4)	-0.7 (7.4)	-0.5 (5.9)	-0.05 (0.6)	-4.8 (52.6)	-1.5 (16.2)	2.2 (-24.0)	-0.4 (4.3)	-0.6 (6.6)	-0.9 (10.2)	-1.3 (14.2)	-1.6 (17.2)	-2.1 (23.4)	-9.1
28090	-5.7 (79.4)	-4.4# (62.2)	-4.0 (55.6)	3.9 (-54.2)	0.2 (-3.5)	-2.4 (33.4)	-3.8 (53.7)	-1.8 (24.9)	0.4 (-5.0)	-0.7 (9.6)	-0.7 (9.4)	-0.7 (10.0)	-0.2 (2.4)	-0.2 (2.9)	-0.2 (3.5)	-7.1
28160	18.4 (139.7)	14.7 (111.9)	11.1 (84.3)	8.4 (63.6)	25.2 (191.8)	44.9 (341.9)	-3.8 (-28.8)	-15.2 (-116)	-26.4 (-201)	-12.0 (-91.7)	-18.8# (-143)	-28.6 (-217)	0.3 (2.4)	0.3 (2.6)	0.3 (2.6)	13.1
28251	62.4 (225.2)	50.7 (183.2)	43.1 (155.4)	-1.7 (-6.0)	0.3 (1.2)	2.6 (9.4)	-1.5 (-5.4)	5.2 (18.9)	10.3 (37.2)	-7.8 (-28.1)	-9.6# (-34.6)	-11.5 (-41.7)	-3.0 (-10.7)	-3.9 (-14.1)	-5.2 (-18.6)	27.7
28370	18.2 (138.4)	19.3 (146.9)	18.8 (142.8)	4.0 (30.4)	16.0 (122.1)	31.7 (241.2)	-3.9 (-29.8)	-15.4# (-117)	-26.5 (-202)	-1.0 (-7.3)	-1.3 (-10.1)	-1.8 (-13.8)	-3.1 (-23.6)	-5.5 (-42.0)	-9.1 (-69.6)	13.1
Number of Decreases	35	36	36	30	29	29	30	28	15	22	22	23	37	37	37	38
Largest Decrease	-50.9	-48.7	-47.4	-30.2	-32.0	-37.8	-38.3	-43.4	-51.3	-94.1	-97.9	-98.9	-67.8	-84.8	-91.2	-54.4
Median	-5.8	-5.3	-7.7	-1.1	-1.0	-1.9	-1.5	-0.6	1.2	-0.4	-0.7	-0.9	-2.4	-3.7	-4.9	-12.7

Notes:

For details about the products and countries involved in each case, see Table 2.3.

L, M, and H designate low, mid, and high elasticity estimates respectively.

N.A. = not available.

\# indicates largest negative causal factor.

* indicates the change was more than tenfold.

(N) indicates a summary result for a particular steel product in the massive 1993 flat carbon steel investigation. It is not a case as defined in this study (see Appendix A) but rather a cumulation of cases for the product.

TABLE 4.3

RELATIVE CAUSES OF CHANGE IN DOMESTIC INDUSTRY OUTPUT

Case No.	Aggregate Demand			Relative Quality			Domestic Supply			Fair Import Supply			Unfair Import Price			Change in Industry Output
	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H	
1989 Cases																
21501	-10.3 (100.9)	-11.2# (110.1)	-12.3 (120.7)	-0.5 (5.3)	0.5 (-4.6)	2.0 (-19.7)	2.2 (-21.7)	5.0 (-49.2)	8.7 (-84.9)	N.A.	N.A.	N.A.	-1.5 (15.1)	-4.4 (42.9)	-8.7 (84.8)	-10.2
21502	-2.7 (44.7)	-3.5 (57.7)	-4.4 (72.3)	-3.4 (54.7)	-1.0 (15.9)	2.4 (-39.2)	2.7 (-43.8)	6.0 (-97.6)	10.8 (-175)	N.A.	N.A.	N.A.	-2.7 (44.3)	-7.5# (121.2)	-14.3 (231.7)	-6.2
21699	8.4 (50.8)	15.2 (91.8)	22.0 (132.7)	13.3 (80.3)	13.8 (83.4)	15.2 (91.7)	-5.1 (-30.9)	-11.1# (-67.2)	-18.0 (-109)	1.9 (11.3)	2.0 (12.3)	1.7 (10.5)	-0.03 (-0.2)	-0.09 (-0.6)	-0.2 (-1.0)	16.6
21830	8.5 (-477)	13.3 (-742)	17.6 (-984)	-5.9 (327.6)	-6.8 (382.1)	-7.3 (405.7)	-5.3 (294.8)	-9.0# (504.0)	-13.6 (757.8)	2.9 (-160)	3.8 (-211)	5.8 (-324)	-0.6 (32.9)	-0.8 (45.6)	-1.3 (73.5)	-1.8
21930	-9.5 (73.0)	-9.1 (69.7)	-8.6 (66.5)	-7.2 (55.1)	-10.3# (79.2)	-13.9 (107.0)	1.0 (-7.9)	3.0 (-23.0)	5.8 (-44.8)	N.A.	N.A.	N.A.	1.3 (-9.8)	1.7 (-12.8)	1.9 (-14.8)	-13.0
22130	3.9 (-977)	4.6 (-*)	5.0 (-*)	-7.7 (*)	-10.3# (*)	-12.9 (*)	1.6 (-391)	2.4 (-608)	3.4 (-839)	N.A.	N.A.	N.A.	1.5 (-383)	2.4 (-584)	3.2 (-790)	-0.4
22160	-44.8 (77.2)	-45.5# (78.4)	-45.7 (78.9)	-13.9 (23.9)	-19.4 (33.5)	-25.8 (44.4)	-30.1 (52.0)	-30.2 (52.0)	-31.0 (53.4)	12.2 (-21.0)	15.2 (-26.1)	18.7 (-32.3)	7.6 (-13.1)	9.9 (-17.1)	12.2 (-21.0)	-58.0

TABLE 4.3 (Continued)

TABLE 4.3 (Continued)

RELATIVE CAUSES OF CHANGE IN DOMESTIC INDUSTRY OUTPUT

Case No.	Aggregate Demand			Relative Quality			Domestic Supply			Fair Import Supply			Unfair Import Price			Change in Industry Output
	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H	
1991 Cases																
24611	-2.8 (14.6)	-3.9 (20.3)	-5.3 (27.5)	-25.9 (133.6)	-29.6# (153.0)	-34.1 (176.2)	0.3 (-1.5)	6.0 (-31.1)	12.8 (-66.4)	11.1 (-57.5)	11.2 (-57.7)	12.3 (-63.7)	0.7 (-3.9)	0.8 (-4.2)	0.9 (-4.7)	-19.4
24670	-2.0 (-286)	-2.9# (-406)	-4.0 (-571)	-0.2 (-27.2)	-0.5 (-76.8)	-0.6 (-78.6)	6.5 (918.1)	9.0 (*)	11.5 (*)	-1.8 (-253)	-2.6 (-361)	-3.6 (-506)	-1.8 (-260)	-2.7 (-380)	-3.6 (-514)	0.7
1992 Cases																
24870	-5.1 (61.3)	-2.9 (34.5)	-1.9 (22.3)	-1.2 (14.9)	-5.4 (65.2)	-8.3 (100.1)	4.2 (-49.9)	8.1 (-97.3)	12.7 (-153)	-7.9 (94.7)	-10.9# (130.4)	-15.0 (180.3)	<0.1 (-0.09)	0.01 (-0.1)	0.01 (-0.2)	-8.3
24970	-3.2 (-64.5)	-7.8 (-159)	-11.6 (-237)	1.0 (20.2)	1.0 (20.4)	-0.4 (-8.7)	13.0 (266.0)	20.6 (420.3)	28.5 (580.3)	-0.06 (-1.3)	-0.4 (-8.5)	-0.9 (-17.5)	*(illegible — overlapping text)*	*(illegible)*	*(illegible)*	*(illegible)*

TABLE 4.3 (Continued)

RELATIVE CAUSES OF CHANGE IN DOMESTIC INDUSTRY OUTPUT

Case No.	Aggregate Demand			Relative Quality			Domestic Supply			Fair Import Supply			Unfair Import Price			Change in Industry Output
	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H	
1993 Cases																
26019	-6.4 (340.4)	-1.1 (57.6)	3.4 (-183)	-7.5 (400.8)	-21.4# (*)	-36.4 (*)	6.8 (-364)	10.6 (-568)	14.5 (-774)	7.4 (-395)	11.2 (-602)	15.3 (-818)	-2.1 (111.8)	-4.0 (215.7)	-6.3 (336.2)	-1.9
26110	-21.3 (113.0)	-24.8# (131.9)	-28.3 (150.6)	-4.0 (21.4)	-4.9 (26.3)	-5.6 (29.7)	12.5 (-66.6)	21.3 (-113)	30.4 (-161)	-0.8 (4.1)	-1.3 (6.9)	-2.0 (10.9)	-4.4 (23.4)	-6.9 (36.6)	-9.7 (51.8)	-18.8
26290	481.6 (400.3)	654.1 (543.7)	835.0 (694.0)	-7.2 (-6.0)	-7.1 (-5.9)	-6.9 (-5.7)	79.9 (66.4)	63.2 (52.5)	40.6 (33.7)	-90.5 (-75.2)	-97.0# (-80.6)	-98.6 (-81.9)	-61.1 (-50.9)	-82.0 (-68.1)	-89.7 (-74.6)	120.3
26621	0.3 (11.9)	-0.8 (-35.1)	-2.2 (-101)	0.1 (6.8)	0.9 (39.9)	1.9 (87.4)	6.3 (287.7)	8.2 (375.5)	10.2 (465.3)	N.A.	N.A.	N.A.	-5.3 (-241)	-8.2# (-375)	-11.7 (-537)	2.2
26622	-9.8 (501.7)	-11.6# (592.6)	-13.3 (678.4)	0.4 (-20.9)	-0.06 (3.1)	-0.6 (31.5)	8.7 (-443)	11.4 (-582)	14.3 (-729)	N.A.	N.A.	N.A.	-0.4 (19.9)	-0.4 (21.7)	-0.5 (27.2)	-2.0
26623	-4.8 (416.8)	-5.8# (500.6)	-6.8 (585.9)	-1.7 (145.1)	-2.7 (231.3)	-3.7 (321.0)	6.9 (-596)	9.5 (-816)	12.0 (-*)	N.A.	N.A.	N.A.	-1.6 (136.3)	-2.3 (197.5)	-3.1 (263.5)	-1.2
26624	-8.6 (281.7)	-9.5# (313.8)	-10.6 (347.7)	0.6 (-18.8)	-0.2 (5.7)	-0.8 (27.6)	5.9 (-195)	8.0 (-264)	10.1 (-333)	N.A.	N.A.	N.A.	-0.7 (22.4)	-1.0 (32.9)	-1.4 (44.5)	-3.0
26641(N)	-6.1 (210.1)	-7.3# (251.0)	-8.5 (292.7)	-0.1 (4.7)	0.1 (-3.6)	0.5 (-15.7)	6.1 (-210)	7.8 (-270)	9.5 (-328)	-0.1 (3.7)	-0.2 (6.2)	-0.3 (9.2)	-2.7 (94.7)	-3.6 (126.0)	-4.6 (159.8)	-2.9
26642(N)	-5.1 (*)	-6.5# (*)	-7.8 (*)	-0.3 (64.5)	0.1 (-22.8)	0.5 (-97.4)	6.4 (-*)	8.0 (-*)	9.5 (-*)	0.3 (-53.8)	0.3 (-56.7)	0.3 (-60.5)	-1.5 (305.2)	-2.0 (410.8)	-2.5 (521.3)	-0.5

TABLE 4.3 (Continued)

RELATIVE CAUSES OF CHANGE IN DOMESTIC INDUSTRY OUTPUT

Case No.	Aggregate Demand			Relative Quality			Domestic Supply			Fair Import Supply			Unfair Import Price			

TABLE 4.3 (Concluded)

RELATIVE CAUSES OF CHANGE IN DOMESTIC INDUSTRY OUTPUT

Case No.	Aggregate Demand			Relative Quality			Domestic Supply			Fair Import Supply			Unfair Import Price			Change in Industry Output
	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H	
1994 Cases																
27612	-1.8 (-48.1)	-4.7# (-127)	-8.0 (-215)	-0.6 (-15.1)	-0.5 (-13.2)	-0.05 (-1.3)	7.8 (209.6)	11.6 (311.3)	15.9 (427.9)	-0.3 (-8.7)	-0.5 (-14.7)	-0.9 (-23.7)	-1.1 (-28.9)	-1.4 (-38.3)	-2.0 (-54.4)	3.7
28090	-4.7 (-324)	-4.0# (-276)	-3.8 (-258)	3.2 (219.2)	0.2 (15.4)	-2.3 (-155)	4.5 (304.7)	6.8 (462.3)	9.2 (631.4)	-0.6 (-38.9)	-0.6 (-41.5)	-0.7 (-46.3)	-0.1 (-9.6)	-0.2 (-12.6)	-0.2 (-16.0)	1.5
28160	15.1 (-152)	13.3 (-134)	10.5 (-106)	6.9 (-69.8)	22.7 (-229)	42.4 (-428)	-21.3 (214.8)	-30.7# (309.7)	-40.2 (405.2)	-10.1 (102.3)	-17.3 (174.4)	-27.4 (276.4)	0.3 (-2.7)	0.3 (-3.1)	0.3 (-3.3)	-9.9
28251	38.2 (92.6)	36.0 (87.4)	33.2 (80.5)	-1.1 (-2.7)	0.2 (0.6)	2.1 (5.0)	18.8 (45.5)	22.1 (53.7)	25.6 (62.1)	-5.3 (-12.8)	-7.3# (-17.7)	-9.3 (-22.7)	-2.0 (-4.8)	-2.9 (-7.1)	-4.1 (-10.1)	41.2
28370	14.9 (-151)	17.4 (-176)	17.8 (-180)	3.3 (-33.5)	14.5 (-146)	30.0 (-303)	-21.4 (215.7)	-30.8# (310.8)	-40.3 (406.3)	-0.8 (8.1)	-1.2 (12.2)	-1.7 (17.4)	-2.6 (26.1)	-5.0 (50.7)	-8.7 (88.1)	-9.9
No. Decreases	35	36	35	30	29	29	10	10	9	22	22	23	37	37	37	31
Largest Decrease	-44.8	-45.5	-45.7	-25.9	-29.6	-36.4	-34.3	-40.2	-46.8	-90.5	-97.0	-98.6	-61.1	-82.0	-89.7	-58.0
Median	-3.4	-4.4	-6.4	-0.8	-0.8	-1.45	4.8	8								

TABLE 4.4

SUMMARY OF MOST IMPORTANT CAUSES OF INJURY TO DOMESTIC INDUSTRY REVENUE UNDER ALTERNATIVE ELASTICITY ASSUMPTIONS

Case No.	Aggregate Demand	Relative Quality	Domestic Supply	Fair Import Supply	Unfair Import Price
1989 Cases					
21501	L, M, H				
21502		L			M, H
21699			M, H		L
21830		L, M, H			
21930	L	M, H			
22130		L, M, H			
22160	L, M, H				
1990 Cases					
22530		M, H		L	
1991 Cases					
23711/2					L, M, H
23760	L, M	H			

TABLE 4.4 (Continued)

SUMMARY OF MOST IMPORTANT CAUSES OF INJURY TO DOMESTIC INDUSTRY REVENUE UNDER ALTERNATIVE ELASTICITY ASSUMPTIONS

Case No.	Aggregate Demand	Relative Quality	Domestic Supply	Fair Import Supply	Unfair Import Price
1991 Cases					
23830					L, M, H
23859		L			M, H
23870			L, M, H		
24109	L, M, H				
24611		L, M, H			
24670	L, M, H				
1992 Cases					
24870				L, M, H	
24970			L		M, H
25300	L, M, H				
25501/2	L, M, H				
25641	L, M, H				
25644	L, M, H				
1993 Cases					
26019		M, H	L		

TABLE 4.4 (Continued)

SUMMARY OF MOST IMPORTANT CAUSES OF INJURY TO DOMESTIC INDUSTRY REVENUE UNDER ALTERNATIVE ELASTICITY ASSUMPTIONS

Case No.	Aggregate Demand	Relative Quality	Domestic Supply	Fair Import Supply	Unfair Import Price
1993 Cases					
26110	L, M, H				
26290				L, M, H	
26621					L, M, H
26622	L, M, H				
26623	L, M, H				
26624	L, M, H				
26641(N)	L, M, H				
26642 (N)	L, M, H				
26643(N)					L, M, H
26644(N)	L, M, H				
26880		L, M, H			
27049	L	M		H	
1994 Cases					
27220	L, M, H				
27240				L, M, H	

TABLE 4.5

SUMMARY OF THE MOST IMPORTANT CAUSES OF INJURY TO DOMESTIC INDUSTRY OUTPUT UNDER ALTERNATIVE ELASTICITY ASSUMPTIONS

Case No.	Aggregate Demand	Relative Quality	Domestic Supply	Fair Import Supply	Unfair Import Price
1989 Cases					
21501	L, M, H				
21502		L			M, H
21699			L, M, H		
21830		L,	M, H		
21930	L	M, H			
22130		L, M, H			
22160	L, M, H				
1990 Cases					
22530		M, H		L	
1991 Cases					
23711/2					L, M, H
23760	L, M	H			

	██████████████████				

TABLE 4.5 (Continued)

SUMMARY OF THE MOST IMPORTANT CAUSES OF INJURY TO DOMESTIC INDUSTRY OUTPUT UNDER ALTERNATIVE ELASTICITY ASSUMPTIONS

Case No.	Aggregate Demand	Relative Quality	Domestic Supply	Fair Import Supply	Unfair Import Price
1993 Cases					
26643(N)	H				L, M
26644(N)	L, M, H				
26880		L, M, H			
27049	L	M		H	
1994 Cases					
27220	L, M, H				
27240				L, M, H	
27440	L, M, H				
27611	H				L, M
27612	L, M, H				
28090	L, M, H				

TABLE 4.5 (Concluded)

SUMMARY OF THE MOST IMPORTANT CAUSES OF INJURY TO DOMESTIC INDUSTRY OUTPUT UNDER ALTERNATIVE ELASTICITY ASSUMPTIONS

Case No.	Aggregate Demand	Relative Quality	Domestic Supply	Fair Import Supply	Unfair Import Price
1994 Cases					
28160			L, M, H		
28251				L, M, H	
28370			L, M, H		
Summary	20L	6L	7L	5L	6L
	18M	7M	7M	4M	8M
	21H	7H	5H	5H	6H

NOTES:

For details about the countries and products involved in each case, see Table 2.3.
L, M, and H designate low, mid, and high elasticity estimates respectively.
(N) indicates a summary result for a particular steel product in the massive 1993 flat carbon steel investigation. It is not a case as defined in this study (see Appendix A) but rather a cumulation of cases for the product.

TABLE 4.6

ALTERNATIVE MEASUREMENT OF RELATIVE CAUSES OF CHANGE IN DOMESTIC INDUSTRY REVENUE
MIDPOINT ELASTICITY ASSUMPTIONS

Case No.	Aggregate Demand	Relative Quality	Domestic Supply	Fair Import Supply	Unfair Import Price	Injury
1989 Cases						
21501#	14.0 (82.1)	-0.5 (-3.1)	-1.7 (-9.8)	N.A.	4.7 (27.5)	21.0, 15.4
21502#	4.0 (36.4)	1.1 (10.2)	-3.1 (-27.6)	N.A.	8.7 (78.6)	46.2
21699#	-14.3 (61.2)	-11.3 (48.3)	2.1 (-8.9)	-1.2 (5.1)	2.6 (-11.3)	4.0
21830	-12.8 (238.3)	8.9 (-166)	3.2 (-58.9)	-4.1 (76.3)	1.4 (-26.9)	2.5
21930#	10.7 (53.5)	10.2 (50.9)	-1.0 (-4.9)	N.A.	-2.6 (-12.9)	11.8
22130	-4.7 (-126)	11.1 (295.2)	-0.1 (-3.0)	N.A.	-3.2 (-84.8)	5.5, 1.5
22160	96.7 (81.2)	24.7 (20.7)	22.5 (18.9)	-26.5 (-22.2)	-9.5 (-8.0)	3.9, 1.3
1990 Cases						
22530	-0.2 (-2.2)	9.9 (89.2)	-0.1 (-1.1)	5.1 (45.7)	-1.6 (-14.8)	2.3, 0.8

TABLE 4.6 (Continued)

ALTERNATIVE MEASUREMENT OF RELATIVE CAUSES OF CHANGE IN DOMESTIC INDUSTRY REVENUE
MIDPOINT ELASTICITY ASSUMPTIONS

Case No.	Aggregate Demand	Relative Quality	Domestic Supply	Fair Import Supply	Unfair Import Price	Injury
1991 Cases						
23711/2	3.6 (-46.4)	11.1 (-143)	-36.2 (468.9)	4.5 (-58.9)	17.6 (-228)	1.3S/ 13.0D
23760#	6.7 (106.9)	-1.0 (-16.3)	-0.8 (-13.2)	-5.9 (-94.2)	4.4 (70.2)	23.2, 23.2
23830	4.1 (57.1)	-9.1 (-127)	-6.3 (-87.8)	1.0 (14.0)	11.2 (156.7)	4.3
23859#	4.0 (17.2)	10.0 (42.5)	-0.2 (-0.9)	-5.3 (-22.6)	19.8 (84.2)	42.4
23870#	16.0 (25.3)	-32.7 (-51.7)	42.2 (66.6)	0.4 (0.6)	30.8 (48.6)	75.5
24109#	3.7 (606.1)	-4.2 (-670)	0.09 (14.4)	-0.3 (-56.0)	1.7 (274.7)	6.4
24611	4.4 (14.8)	46.6 (156.9)	-4.2 (-14.3)	-10.4 (-34.9)	-1.8 (-6.1)	1.2
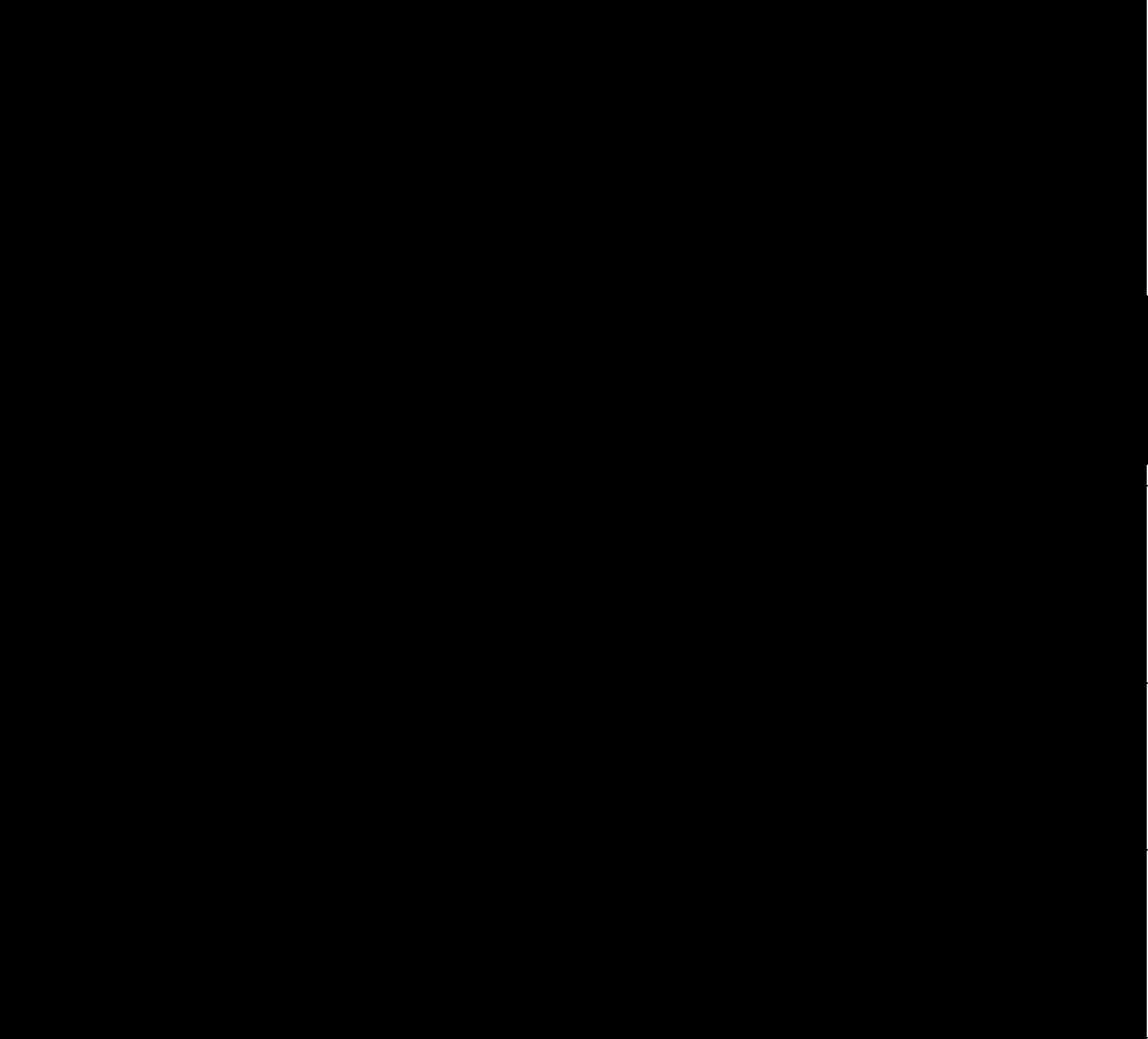
TABLE 4.7 (Continued)

ALTERNATIVE MEASUREMENT OF RELATIVE CAUSES OF CHANGE IN DOMESTIC INDUSTRY OUTPUT
MIDPOINT ELASTICITY ASSUMPTIONS

Case No.	Aggregate Demand	Relative Quality	Domestic Supply	Fair Import Supply	Unfair Import Price	Injury
1991 Cases				4(0)		
23711/2	0.9 (-2.2)	2.6 (-6.6)	-44.2 (113.4)	1.1 (-2.8)	4.0 (-10.3)	0.3S/ 3.0D
23760#	6.1 (135.9)	-0.9 (-20.8)	-1.9 (-42.4)	-5.4 (-121)	4.0 (89.4)	20.9, 20.9
23830	3.7 (-*)	-8.3 (*)	-11.8 (*)	0.9 (-283)	10.2 (-*)	3.9
23859#	0.7 (11.3)	1.6 (27.2)	2.2 (37.1)	-0.9 (-15.4)	3.1 (52.0)	6.1
23870#	14.5 (16.7)	-30.3 (-34.9)	64.6 (74.5)	-0.9 (-10.3)	27.6 (31.9)	66.7
24109#			-0.9 (-283)			

TABLE 4.7 (Concluded)

ALTERNATIVE MEASUREMENT OF RELATIVE CAUSES OF CHANL 411 2.313iS 0.75 75. 0.75 0.5 100.t89IC 10lcluded)

CHARACTERISTICS OF UNFAIR IMPORT CASES
1989 TO 1994

Row	Case No.	Date Report Issued	Product	Margin	Domestic Market Share of Unfair Imports
				Data S. TD 0.2141 Tc 0.1594 6Product	

TABLE A.1

CHARACTERISTICS OF UNFAIR IMPORT CASES
1989 TO 1994

Row	Case No.	Date Report Issued	Product	Data Type	Margin		Domestic Market Share of Unfair Imports		BIAD	BIAS	CV
					Subsidy	Dumping	Value	Quantity			
					(Percent)	(Percent)	(Percent)	(Percent)			
39	23574	FEB91	HEWING TOOLS	INSUFF	N/R	15.02	.	.	ALL	N/R	ALL
40	23580	FEB91	SODIUM THIOSULFATE	INSUFF	N/R	48.29	.	.	ALL	N/R	PART
41	23711	APR91	FRESH ATLANTIC SALMON	VQ	2.27	VQ	Percent)	(Percent)	(Percent)		
2	23712	APR91	FRESH ATLANTIC SALMON	VQ	N/R	23.80	.	.	N/R		
	23859	JUN91	SILICON METAL	VQ	N/R	107.98		N/R 48	24109		

TABLE A.1

CHARACTERISTICS OF UNFAIR IMPORT CASES
1989 TO 1994

				Margin	Domestic Market Share of Unfair Imports

9989 TOket ShVQ.106355.5c.1602 T072Case N(14.47) Tj 21.75 0 TD 58.62

Row   N/A   N/A   TABL TNONE
               1ALw0

CHARACTERISTICS OF UNFAIR IMPORT CASES
1989 TO 1994

Row	Case No.	Date Report Issued	Product	Data Type	Margin		Domestic Market Share of Unfair Imports		BIAD	BIAS	CV
					Subsidy	Dumping	Value	Quantity			
					(Percent)	(Percent)	(Percent)	(Percent)			
115	27720	MAY94	CALCIUM ALUMINATE CEMENT	INSUFF	N/R	18.91	.	.	NONE	N/R	ALL
116	27730	MAY94	NITROMETHANE	INSUFF	N/R	233.70	.	.	ALL	N/R	ALL
117	27781	MAY94	SILICON ELECTRIC STEEL	INSUFF	24.42	N/R	.	.	N/R	NONE	N/R
118	27782	MAY94	SILICON ELECTRIC STEEL	INSUFF	N/R	31.08	.	.	ALL	N/R	NONE
119	27790	JUN94	SILICON CARBIDE	INSUFF	N/R	406.00	.	.	ALL	N/R	ALL
120	27800	JUN94	N/R	INSUFF	N/R	31.08	.	.	NONE	N/R	NONE
120		JUN94	N/R								

TABLE A.2 (Continued)

ELASTICITIES USED IN MODEL TO ESTIMATE EFFECTS OF UNFAIR IMPORTS

Case No./ Product	(1) Elasticity of Demand for Composite Product			(2) Elasticity of Substitution in Demand between Domestic and Import Product			(3) Elasticity of Supply for Domestic Industry		
	L	M	H	L	M	H	L	M	H
1989 cases									
L									

TABLE A.2 (Continued)

TABLE A.2 (Concluded)

ELASTICITIES USED IN MODEL TO ESTIMATE EFFECTS OF UNFAIR IMPORTS

Case No./ Product	(1) Elasticity of Demand for Composite Product			(2) Elasticity of Substitution in Demand between Domestic and Import Product			(3) Elasticity of Supply for Domestic Industry		
	L	M	H	L	M	H	L	M	H
1994 cases									
27220/Ferrosilicon	-0.2	-0.35	-0.5	1.1	2	3	5	10	20
27240/SS flanges	-0.3	-0.5	-0.7	3	3.5	4	5	10	20
27440/SS pipe	-0.3	-0.5	-0.7	2	3.5	5	5	10	20
27611/HR wire rod	-0.5	-0.75	-1	3	4	5	5	10	20
27612/HR wire rod	-0.5	-0.75	-1	1.1	1.5	2	5	10	20
28090/Phthalic anhydride	-0.5	-0.75	-1	1.5	2	2.5	5	10	20
28160/Pencils	-1	-1.5	-2	2	3	4	5	10	20
28251/Garlic	-0.4	-0.65	-0.9	3	4	5	2	3	4
28370/Pencils	-1	-1.5	-2	2	3	4	5	10	20

Notes:

5-0.90.9Hrte9f -0832TD 0.1Orct5Sgcity 8F;3 Tc (H) Mork f Tj Kel5 %.751rteAppe5 x D. hiuC hiuC -2 pass;5160.9