ECONOMIC ISSUES

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

by

Kenneth H. Kelly
and
Morris E. Morkre

Bureau of Economics
Federal Trade Commission
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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 the 63 cases), between 5 and 10 percent in 10 cases (16 percent), between 10 and 20 percent in 14 cases (22 percent), and in excess of 20 percent in seven cases (11 percent). These percentages are significantly higher than those we had earlier found for the period 1980-1988.

One of the key variables that influences the magnitude of the adverse effect of dumping is the size of the dumping margin, which measures the percent by which the price foreign firms charge U.S. importers needs to be increased to reach the "fair" price. The average dumping margin increased from 33 percent in the period 1980-1988 to 68 percent in the period 1989-1994. The dumping

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 cause of decline in revenue in 20 industries, and in output in 18 industries. Changes in unfair import price was the largest cause of decline in revenue and in output in eight industries. Changes in relative quality is the largest cause of decline in revenue in eight industries, and in output in seven industries. Changes in aggregate demand, unfair import price, and relative quality had the largest adverse effects on domestic industry revenue and output, as measured by the median over the 44 industries. These results are robust to changes in the parameters of the model.

On average, the change over time in aggregate demand had a greater adverse effect on domestic industry than that of the unfair trade practice or that of the other individual demand and supply relationships. Moreover, in the majority of cases (30 of 44) changes in at least one of the ordinary demand and supply relationships had a greater adverse effect on the competing domestic industry than the effect of the unfair trade practice.

CHAPTER 1

INTRODUCTION

The remarkable post World War II prosperity is attributable in part to the liberalization of barriers to international trade. Trade liberalization is especially noteworthy because it increases the scope for competition. Domestic firms that are initially sheltered from foreign competitors because of trade barriers, such as tariffs and quotas, are forced to compete with foreign firms when the barriers are lowered. The resulting increase in competition lowers prices and improves product quality; it can also spur efforts to improve production efficiency.[1] Over the past half century, comparing the 1950s to the 1990s, per capita U.S. income (real GNP in constant 2000 dollars) more than doubled, from $13,250 to $30,600, while the share of imports in aggregate U.S. income more than tripled, from 2.9 percent to 9.5 percent.[2] Comparing the same periods the average *ad valorem* tariff rate on U.S. imports declined by more than half, from 5.9 percent to 2.7 percent.[3] However, other trade barriers have resisted liberalization. These include nontariff barriers (NTBs) that apply to particular sectors, such as the import quotas on sugar and textiles. But perhaps the best known of the NTBs is the barrier consisting of the laws and regulations that restrict so-called unfairly traded imports, imports that are dumped by foreign firms or subsidized by foreign governments.[4]

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[1] Trade liberalization plays a positive role in increasing the level of income (static effect) as well as increasing the growth rate of income (dynamic effect). There is an extensive literature for both types of effects. With respect to the static effect see for example the surveys by Feenstra (1992) and the USITC (1999). With respect to the dynamic effect see for example Mankiw (1995). Also, the results of a recent empirical study by Lawrence (2000) suggest that total factor productivity of U.S. industries was stimulated by liberalization of imports. In addition, in an empirical study comparing productivity of U.S. and foreign firms Baily and Solow (1991) find that a domestic industry is forced to improve its productivity when it is exposed to "best practice" international competition. They measure international competition with an index that reflects (i) imports, (ii) transplants of foreign plants in the domestic economy, and (iii) head-to-head competition in third markets.

[2] Calculations based on data from the Bureau of Economic Analysis (U.S. Department of Commerce) and the U.S. International Trade Commission. However, an increase in the ratio of imports to income (or production) may not be a valid indicator of an increase in the importance of foreign suppliers in the domestic market. As emphasized by Steiner (1995), in certain industries (e.g., consumers goods industries such as toys) U.S. firms have increasingly obtained their physical products from foreign manufacturing plants in recent years and some of these plants are owned by the U.S. companies that purchase from them. Consequently, it is possible that the relative position of leading firms in the domestic market is unchanged over time even though the increase in reported imports would suggest otherwise.

[3] Based on data from the U.S. International Trade Commission (USITC). The reported tariff rate is the weighted average rate for all imports. The average tariff rate for dutiable imports fell from 12.2 percent in the 1950s to 5.0 percent in the 1990s.

[4] It should be noted that there is an alternative view about the effect of trade liberalization on competition. For example, in his compendium on the International Trade Organization, Wilcox (1949, p. 105) expressed concern that the benefits of reducing tariffs and eliminating quotas might be offset if international cartels created private barriers to trade. Similar views have been voiced subsequently by antitrust scholars, for example Fox (1994, p. 28). However, as far as we are aware there is no systematic empirical evidence to support this view.

The United States has considerable experience with administering the laws that restrict unfairly traded imports, laws that are permitted under the GATT/WTO system. The Countervailing Duty (CVD) law, which applies to subsidized imports, was enacted over a century ago, in 1897; the Antidumping Duty (AD) law, which applies to less than fair value (LTFV) imports, was enacted in 1921.[5] LTFV means either that (i) foreign firms sell in the U.S. at a price below the price they charge their home customers (international price discrimination and price dumping) or (ii) foreign firms sell in the U.S. at a price below cost (cost dumping). Unfairly traded imports are subject to special tariffs (i) if they are found to be dumped or subsidized and (ii) if such imports are found to cause "material injury" to domestic industry making a "like product".

Somewhat surprisingly, the number of AD and CVD petitions was relatively modest until 1980 when the U.S. Congress reorganized the administration of AD and CVD laws.[6] In addition, the number of cases was stimulated by changes in the AD and CVD laws that made it easier for U.S. firms to succeed in having AD or CVD duties imposed on cited imports.[7]

The increasing use of AD and CVD laws in recent years has been studied by economists with growing alarm.[8] Indeed, a variety of concerns have been raised about the AD and CVD laws and the way they are administered, including: the process lacks adequate transparency;[9] the laws

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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 Prussa (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.)

are used excessively[10] or capriciously;[11] there is a systematic bias against exporters;[12] the laws have become captured by domestic interests and their enforcement made a part of corporate strategy;[13] they are used to harass foreign exporters;[14] and they lead to even more stringent restrictions on imports such as voluntary export restraints (VERs).[15] But perhaps the most serious concern is that the AD and CVD duties imposed on unfairly traded imports are significantly biased upward.[16] In short the AD and CVD laws are viewed as being overly protectionist.

Notwithstanding these concerns there are several reasons why the import restrictions under the AD and CVD laws have resisted the general post WWII movement to liberalize trade. These reasons are in addition to general sentiments in favor of sheltering domestic firms and workers from foreign competition and a general view that either increased imports or low-priced imports are in some sense unfair.[17] One is the belief that the AD and CVD laws provide a safety valve for special interest groups who would otherwise work to undermine or defeat broad liberalization efforts.[18] However, the AD and CVD laws are not the only alternative for such a safety valve: in a general sense the escape clause provision of U.S. trade law is also available to serve this role. Although there are significant differences in the statutory frameworks of the fair (escape clause) and unfair

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

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

[12] Scherer (1998, p. 201f.) notes the similarity between the Robinson-Patman Act and the AD law: both are concerned with price discrimination. However, he believes that enforcement of the RP Act has declined in response to criticism of scholars and the increasing use of cost-benefit analysis in the antitrust agencies. However, enforcement of the AD law has not declined. See Destler (1995, p. 242f.) for an description of how the ambiguities in the Uruguay Round Agreement were implemented in domestic legislation in favor of domestic industries prone to use the AD/CVD laws.

[13] Hindley and Messerlin (1996), p. 42f.

[14] Bhagwati (1988), p. 48.

[15] Rosendorff (1996). However, VERs were banned in 1995 consequent to the Uruguay Round.

[16] Boltuck and Litan (1991), Cass and Boltuck (1996), pp. 365-8, Horlick (1989), and Palmeter (1991b).

[17] These sentiments fluctuate over time and in part are related to the business cycle. For example, Leidy (1997) found that the number of AD/CVD petitions filed over the period 1980 to 1995 was significantly related to the state of the U.S. macroeconomic activity (i.e., rate of unemployment and rate of capacity utilization).

[18] Cass and Boltuck (1996), p. 404; Finger, Ng, and Wangchuk (2000); Sykes (1998), p. 37f.

(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 constitutes unfair trade. Moreover, it has long been known that there are fundamental similarities in the way several administrators approach decision-making in fair and unfair import cases, and that for them AD/CVD cases are essentially a "weak" escape clause case.[19]

A second reason emphasizes the harm attributed to unfairly traded imports by various domestic interests. It is hardly remarkable that someone somewhere in the U.S. economy will suffer in some way from unfairly traded imports – a loss of sales, a loss of income, perhaps a loss of employment. Many people – not just those directly affected - believe that this harm is inequitable and unjust: it is a type of competition that is not to be tolerated, particularly since foreign firms or governments are responsible. However, once again the AD and CVD laws are not the only policy option to alleviate domestic harm from imports; the escape clause might also be used instead.[20]

A third reason is the belief that foreign export firms benefit from arrangements/policies of their respective governments and set an export price to the United States that reflects either price discrimination or selling below cost of production. True price discrimination and pricing below cost may be deemed unfair in some sense. However, it is not clear from the evidence in actual AD investigations conducted by the DOC that many foreign firms actually price in either of these two ways. For example, a recent study by Lindsey (1999) carefully examines the methodologies used by DOC in AD cases between 1995 and 1998. He finds that there were only four instances out of 94 where the foreign firm operated in a market economy and set a lower price on U.S. exports than the price charged to the home market.[21] Somewhat more frequently, in 20 instances, he reported

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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 or economy-wide harm in the importing country from the subsidized exports.[23]

In contrast to the CVD law there is an explicit economic rationale for the AD law. As Willig (1998) explains predatory dumping and strategic dumping can cause long term harm to the country's consumers and to the country generally. Since both involve actions by a foreign firm or foreign firms that enhance their market power there is, of course, an overlap of interest between AD law and antitrust law.[24]

Predatory and strategic dumping differ in the following ways. The distinctive feature of predation is that the foreign firm pursues actions that drive out or severely weaken domestic rivals, e.g., set export price below (marginal) cost. If successful the foreign predator becomes the

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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.

monopoly or dominant supplier to the domestic market and is able to set price high enough to recoup earlier losses. The distinctive feature of strategic dumping is the collaboration between foreign country government and native companies that enjoy economies of scale. The foreign country government raises import barriers (e.g., tariffs or quotas) to protect its own firms. Assuming the foreign market is large enough then foreign firms will have sufficiently higher outputs and gain a cost advantage over domestic rivals as a result of (assumed) scale economies.

Economists are typically skeptical about allegations of predatory pricing because the requirements for successful predation are severe.[25] This skepticism carries over to international predation.[26] However, until recently there was little systematic empirical evidence about international predation and its relationship to dumping.[27] An important contribution that helps redress this problem is the study by Willig and his collaborators (in Lawrence, 1998). This study provides an empirical assessment of the likely prevalence of predation and strategic dumping in major importing countries. The countries covered are Canada, the European Community, and the United States; the sectors studied are electronic products and semiconductors.[28] In her examination of U.S. antidumping investigations during the 1980s Shin (1998) finds that at most 10 percent of

[25] A classic reference for predatory pricing is the Standard Oil company's actions in the late nineteenth century. For many years after the Standard Oil antitrust decision in 1911 it was believed that the Standard Oil company achieved its commanding position in the oil refining business by buying up rivals after it had weakened them by a campaign of predatory price cutting. However, McGee's (1958) examination of the record of the case did not support the predation finding. However, McGee believed that Standard Oil had significant monopoly power but did not satisfactorily explain the source of this power; the principal challenge for such an explanation is that barriers to entry into petroleum refining were apparently very low). More recently, Granitz and Klein (1996) overcome this problem by arguing that Standard's monopoly power arose from the role it played in policing a collusive arrangement by railroads in transporting crude oil and kerosene. Because of its size (eventually with 90 percent of the refining capacity) Standard would be able to substantially control petroleum shipments for the three colluding railroads. As reward for its policing efforts Standard was given favorable transport rates, rates which disadvantaged its rivals ("raising rivals costs") and encouraged them to sell out to Standard. For historical background on Rockefeller's and Standard's activities during the 1870s see Chernow (1999), chapters 6 and 8. For elaboration on "raising rivals costs" strategies see Salop and Scheffman (1987).

[26] The principal case of alleged international predation involved Japanese companies exporting color TVs to the United States. Elzinga (1999) explains that predation was not reasonable behavior by Japanese companies. It was unlikely they would have been able to recoup the losses incurred during the period of predation. The U.S. Supreme Court found against predation. *Matsushita Electric Industrial Corp. Ltd., et al. v. Zenith Radio Corp. et al.*, 475 U.S. 574 (1986).

[27] There are various suggestions that predation generally is not appropriately characterized as irrational behavior, as McGee (1958) and others have suggested. For example, extending the asymmetric information game theoretic framework of Milgrom and Roberts (1982), Bolton et. al (2000) argue that predation can be successful and a perfectly rational business policy. However, although particular examples of aggressive business behavior may be suggestive of predation the key issue, as emphasized by Spector (2001), is that to qualify as predatory the behavior needs to be harmful for consumer and social welfare.

[28] The country study of Canada was done by Dutz (1998), the United States by Shin (1998), and the European Community by Bourgeois and Messerlin (1998); the sector study of electronic products was by Messerlin and Naguchi (1988) and semiconductors by Irwin (1998).

them were likely to involve predatory dumping.[29] She did not, however, have sufficient data to complete her study of all cases. If she had been able to do so the reported likelihood of predation would have been even smaller.[30] The overall results of the studies by Willig and his collaborators suggest that predatory dumping and strategic dumping are relatively rare.[31]

Our previous report, Morkre and Kelly (1994), also provides information relevant to predatory dumping. We found that at least 85 percent of the AD investigations from 1980 to 1988 involved injury to domestic industry that was less than 10 percent. We measured injury by percent loss of domestic industry revenue. Although some domestic competitors may have suffered significant harm from dumping it is unlikely that domestic competition was much affected, and if domestic competition was not significantly affected by dumped imports then the dumping could not be predatory.

This evidence suggests that dumped imports are not generally anticompetitive. However, regardless of the appropriate default position for AD investigations the more important issue is that there is a precise coincidence of interest between AD and antitrust with respect to the economic foundation of the AD law. AD laws are not necessary to address predatory dumping: the antitrust laws can be used instead.[32]

Whichever of these four reasons – safety valve, inequitable injury, truly unfair pricing, anticompetitive – is believed to provide the strongest defense for the AD and CVD laws is an open question. However, available evidence suggests that the perception that there is an economic

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[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 and CVD cases and, as explained by Suomela (1993, pp. 60-68), there are several reasons to be wary of comparing prices of domestic and imported products in actual AD and CVD investigations (e.g., quality differences, non-physical differences between products, list versus transaction prices and spot versus contract prices).

[32] This is demonstrated by the prosecution of 23 international cartels in the 1990s by the Department of Justice. See International Competition Policy Advisory Committee (2000), chapter 4, and Evenett et al. (2001).

foundation for the AD law may be misplaced. In addition, recent developments point to a reorientation in the relationship between AD and antitrust. Instead of AD laws being required to address competitive problems it is possible that the existence of such laws lead to antitrust problems.

There is a growing recognition that domestic firms may use the AD law to create or support cartels or collusive arrangements. Economists have long conjectured that AD laws might facilitate collusion. One of the earliest efforts to provide a formal analysis is by Staiger and Wolak (1989). However, with but few exceptions the link between collusion and AD laws has been well concealed.[33] Recently evidence has been uncovered about cartels spawned by U.S. AD law. Perhaps the clearest case involves ferrosilicon. As reviewed by Pierce (2000), domestic producers of ferrosilicon used the AD law to attempt to protect a cartel involving firms in the United States and Europe. Another case involves musical instruments. Taylor (2001) cites an Italian maker of musical instruments who alleged that its U.S. competitor threatened AD action unless it agreed to a collusive arrangement. In addition to supporting domestic cartels U.S. AD law may create or support foreign cartels. Perhaps the most important case is that of semiconductors. According to Flamm (1996, p. 149f.) Japanese producers were jawboned in early 1982 by U.S. trade officials to boost prices on their 64K DRAM exports to the United States. This apparently led to the formation or strengthening of a cartel in Japan, one that was supported by MITI, that cut U.S. exports and raised prices.[34] Another case of this type involves thermal fax paper. A U.S. District Court recently found that a Japanese producer directed its U.S. subsidiary to coordinate with other U.S. producers to threaten to file an AD petition against Japanese exporters.[35] This would

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[33] Since our focus here is with the effects of U.S. AD law we have not explored the effects of the AD laws of foreign countries. However, it is important to note that there is a significant study by Messerlin (1990) about the anticompetitive consequences of the EC AD law. Messerlin presents evidence showing that firms in the EC used the AD law to support domestic cartels in the early 1980s. The cases involve the chemical industry, which has been one of the major users of the EC AD law.

[34] This led to an investigation by the U.S. Justice Department about Japanese cartel behavior. Flamm (1996, p. 151) concludes that "...the whole sequence of events left the Japanese somewhat confused." The DOJ investigation apparently closed within a year. The challenge of Japanese DRAMs in the U.S. market ultimately led to the Semiconductor Trade Arrangement with Japan in 1986, which was in part an elaborate type of voluntary export restraint (VER). Flamm (1996, chap. 4); Irwin (1998).

[35] United States v. Nippon Paper Indus., 62 F. Supp. 2d 173, 180 (D. Mass. 1999), esp. fn. 12.

encourage Japanese firms to get together to form a cartel.[36] In sum, even though the evidence to date is relatively modest it does not appear inappropriate to suggest that anticompetitive abuses of AD laws may be a problem that warrants increased attention.[37]

The filing of AD or CVD complaints could be viewed as anticompetitive actions through governmental processes.[38] While such actions can be quite effective at limiting or even blocking foreign rivals in the domestic market, such activity is typically not actionable under the antitrust laws because, absent evidence of abuse, it is protected by the first amendment guarantee of the right to petition the government.[39] One possible example of this behavior is a case involving aluminum rod from Venezuela.[40] A U.S. firm, Southwire, filed AD and CVD petitions against its former Joint Venture partner, Sural, and other Venezuela exporters in July 1987. The USITC majority found that domestic industry was threatened with injury and voted to impose AD duties in August 1988. The case was appealed to the reviewing courts. Thus began a legal saga lasting six and one-half years, until February 1995, during which time Venezuelan exporters faced supernumerary taxes in the form of an AD duty of 5.8 percent. Eventually the Court of International Trade rejected the injury claim of the domestic petitioner and ordered the AD to be revoked. The Court concluded that:

> "It is plain from the facts of this case that Southwire has brought this petition not to protect its own operation from injury ... but to erect barriers to potential

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[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 filed an AD petition against a Chinese competitor; the alleged cooperation took the form of Carus agreeing to act as surrogate firm for Chinese producers. According to Maur, firms are normally reluctant to serve as surrogates for reasons of confidentiality.

[38] For example, Bork (1978, chap. 18) has characterized such behavior as "predation through governmental processes". In the situation at hand the possible consequence is a governmental action to impose in special tax on rivals, in effect a form of "raising rivals costs".

[39] The key cases in this area are *Eastern Railroad Presidents Conference v. Noerr*, 365 U.S. 127 (1961) and *United Mine Workers v. Pennington*, 381 U.S. 657 (1965).

[40] See the USITC report *Certain Electrical Conductor Aluminum Redraw Rod from Venezuela*, Pub. 2103, August 1988.

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]

[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).

The foregoing perspectives suggest that there is a menu of issues and questions about AD and CVD laws and procedures that can be addressed in further empirical efforts. However, our aim in the present study is relatively limited. In our previous report, Morkre and Kelly (1994), we provided estimates of the magnitude of injury to domestic industries caused by dumped and subsidized imports during the nine year period 1980 to 1988. The present study extends this work in three ways. First, six additional years of cases are investigated, covering 1989 to 1994. Second, we now also estimate the effects of unfairly traded imports on consumers and workers. Third, the effects of unfairly traded imports on domestic industry are compared with the effects of changes in demand and supply. It is not surprising that in virtually every AD and CVD investigation one can find several factors, in addition to unfairly traded imports, that are causing problems for domestic producers and workers. What we attempt to do here is to quantify the magnitude of the adverse effects of some of these factors and then compare them with the magnitude of the adverse effect of unfairly traded imports.

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

[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

[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.

calculate injury are confidential. Unfortunately this excludes several interesting cases.[53]

Based on our earlier study of cases decided during 1980-1988 we generally expect that the magnitude of the injury caused by unfair imports will be positively related to the U.S. market share of unfair imports and to the margin of dumping or subsidy. The 63 cases we examine in 1989-1994 are noteworthy because the vast majority of them have relatively large unfair import shares and margins. There are only seven cases where the market share of unfair imports is less than 5 percent.[54] There are only five cases (but only four additional cases) where the dumping or subsidy margin is less than 5 percent. We therefore suspect that the magnitude of injury from unfair imports will be moderately high.

As was true for our earlier study an interesting feature about 1989-1994 AD and CVD cases is their diversity. They cover a wide assortment of products. Most are well established or technologically unsophisticated (cement, headwear, lumber, pork). Only a few arerelatively new or sophisticated (consoles and transducers for digital readouts, telephone systems).

The cases vary considerably in terms of market size whether measured by domestic consumption or by employment of the domestic industry. For half of them (29 of 56) annual apparent domestic consumption is between $100 million and $1 billion.[55] The rest are almost evenly divided: 16 are above this range and 11 are below it. The biggest cases are:

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[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 fact that flat panel displays enter as components into lap top computers. If lap top assembly operations are highly mobile internationally the effect of issuance of an AD order on flat panel displays will be to encourage lap top assemblers to shift operations offshore. In this case the effect of the AD order on domestic producers of flat panel displays and on consumers of lap tops may be very small. In contrast, if lap top assembly operations are not mobile internationally, then AD duties on flat panel displays will be passed on in the form of higher component prices paid by domestic lap top assemblers. Given that lap tops are imported, domestic lap top assemblers are disadvantaged by the AD duties and may subsequently seek relief from competitive imports. The consequence is that AD duties applied to (upstream) component products may subsequently lead to AD duties involving (downstream) finished products.

See Hart (1993) for background on the flat panel display AD case. Hart notes that domestic assemblers of lap top computers announced they were moving offshore after the final affirmative vote by the USITC on flat panel displays.

See Feinberg and Kaplan (1993) for an empirical test of the proposition that AD or CVD duties on upstream products subsequently lead to AD or CVD duties on downstream products. Feinberg and Kaplan examine cases involving chemicals/plastics and metals products and find a tendency for upstream cases to precede downstream cases, for upstream protection to spread downstream. However, this evidence also suggests that the downstream industries considered are not highly mobile internationally.

[54] However, there are nine cases where we only have total imports. Also, there are four summary cases listed in Table 2.3 that give overall results for the main products involved in the massive steel investigations of 1993. They are 26641(N), 26642(N), 26643(N) and 26644(N), where "N" denotes that it is not a case as that term is defined in this study. See the Appendix for the definition of case in this study. Each summary case involves a steel product and cumulates all the countries alleged to be the source of unfair imports. The USITC decided that several countries were individually too small to have a significant effect on domestic industry. They were treated individually under the negligibility exception to cumulation, 19 U.S.C. 1677(7)(V)(v), which became part of U.S. law in 1988.

[55] There are data on apparent domestic consumption for only 56 of the 63 cases in Table 2.3.

- $10.3 billion, subsidized softwood lumber from Canada (case 25300);
- $11.3 billion, dumped and subsidized cold-rolled steel from Japan and other countries (case 26642(N));
- $14.5 billion, dumped and subsidized hot-rolled steel from Canada and other countries (case 26641(N)).

With respect to number of employees, the majority of cases (35 of 57) have between 500 and 5,000 workers.[56] The cases with the fewest workers are:

- 59 workers, dumped sparklers from China (case 23870);
- 61 workers, dumped martial arts uniforms from Taiwan (case 22160);
- 91 workers, dumped antimony from China (case 24970).

On the other hand, there are five cases where employment exceeds 10,000 workers:

- 11,681 workers, dumped and subsidized ball bearings from Japan and others (case 21851);
- 12,254 workers, dumped and subsidized cold-rolled flat steel from Japan and others (case 26642(N));
- 13,681 workers, subsidized pork from Canada (case 22180);
- 16,177 workers, dumped and subsidized hot-rolled steel from Japan and others (case 26641(N));
- 27,492 workers, subsidized softwood lumber from Canada (case 25300).

[56] Employment data are available for only 57 cases.

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 factors that affect producers. In addition to international factors, U.S. industries may be adversely affected by purely domestic factors, including sectoral as well as general downturns in business activity, increases in the prices of important inputs (such as labor), and the development of new technologies

[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. We compare the actual performance of domestic industry in the reference period to an estimate of what the domestic industry's performance would have been in the absence of ("but for") the unfair practices of dumping and subsidization. This counterfactual analysis ensures that we do not mix causal factors: by design all other factors (other than unfair practices) are held constant. The reference period is generally the most recent complete year during the (usually three year) period of investigation for each case.

Computable Partial Equilibrium Model

Differentiated products. A computable partial equilibrium model[58] is used to estimate the counterfactual performance of the domestic industry allegedly injured by dumped or subsidized imports.[59] The domestic industry's product is assumed to be a close but not perfect substitute for the unfairly imported product. This reflects the views of the former chief economist at the USITC.[60] It also accords with the generally held view among students of international trade: with the possible exception of certain highly standardized ("commodity") products[61] domestic consumers are not completely indifferent between an import product and its closest domestic substitute.[62]

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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).

In several unfair import cases not all imports are dumped or subsidized. These other import products are "fair imports". The product differentiation assumption is also extended to fair imports. They are assumed to be a close but not perfect substitute for both the domestic and the unfairly imported product.

Market structure. Given the price of unfair imports, prices and quantities of the domestic product and fair imports are assumed to be determined by competitive market forces. The price of unfairly traded imports is assumed to be set exogenously.[63]

Diagram of model. Figure 3.1 illustrates the model. (Note that all diagrams and tables are at the end of this study.) Panel A is for the domestic product, panel Bfor unfair imports, and panel C for fair imports. Note that we adopt the convention of denoting initial prices and quantities (pre-unfair practice) by the superscript "o" and subsequent observations (post-unfair practice) by the superscript "1".

The unfair practice – dumping or subsidy or both – reduces the price of the unfairly imported product from P_u^o to P_u^1 (panel B). The difference between P_u^o and P_u^1 equals the unfair (AD or CVD) margin m. That is: $P_u^o = (1+m)P_u^1$. As a consequence of the drop in price from P_u^o to P_u^1, consumers substitute in favor of unfair imports and against both the domestic product and fair imports. This is shown in panel A by the contraction in demand for domestic productfrom D_d to D_d' and in panel C by the contraction in demand for fair imports from D_f to D_f'.

Effects of Unfair Imports

Injury to domestic industry. Injury is measured by percent decline in domestic industry revenue. An advantage of this measure is that it incorporates the impact of unfairly traded imports on both the quantity and price of the domestic product.[64] Figure 3.1 illustrates. Prior to the unfair

[63] There is an exception for AD cases involving price discrimination dumping by a foreign firm (or firms) where the price of unfair imports would be endogenous to the model. However, such cases are comparatively rare among those examined in this study.

[64] Other measures of injury could conceivably be used, i.e., the decline in the marketvalues ofindividual firms on capital markets. However, the typical unfair import case either involves privately held companies (that do not have equity shares traded on the stock exchanges) or the specific product relevant to a case is a relatively small part of theproduct line oflarge multiproduct companies. See, however, Hartigan, Kamma, and Perry (1989) who apply the capital market event study method to a sample of USITC cases.

practice domestic industry revenue is $P_d^o*Q_d^o$ (panel A). Subsequent to the unfair practice domestic industry revenue declines to $P_d^1*Q_d^1$. Injury is $100*(P_d^1*Q_d^1-P_d^o*Q_d^o)/(P_d^o*Q_d^o)$ percent. As shown, unfair imports invariably injure the domestic industry.[65]

Three other aspects of industry injury are also reported: (a) the absolute change in total domestic industry revenue, (b) that part of (a) due to the decline in quantity of shipments ("volume effect"), and (c) that part of (a) due to the contraction in the average price received for those shipments ("price effect"). By construction, (a)=(b)+(c). Panel A illustrates: (a) is area acdefg, (b) is rectangle bcde, and (c) is rectangle abfg. The relative importance of the volume and price effects depends entirely on the elasticity of the domestic industry supply curve. The greater this elasticity the greater is the volume effect relative to the price effect.

Injury to workers. Unfairly traded imports may displace domestic workers and cause short term transitional unemployment. The employment effect of unfair imports is measured by the reduction in the number of production workers in the domestic industry competing with unfair imports.[66] Assuming the ratio of number of production workers (L) to domestic industry production (X) is constant (in the relevant range) the number of workers displaced by unfair imports is $(L/X)*(Q_d^o - Q_d^1)$.

Gain to consumers. U.S. consumers benefit from the lower prices caused by unfair import practices. Consumer gains are an important part of the overall or economy-wide welfare effect of

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[65] There are situations or conditions where unfair imports do not cause injury. However, they involve changing the model or changing the measure of injury. For example, consider a case where the differentiated product model is replaced by a homogeneous product model. Also suppose, as a perhaps special case, that the price of a homogeneous product is determined in a world market and that the United States is too small to affect it (i.e., the U.S. is a price-taker). Under these conditions, dumped imports from some (but not all) countries do not injure the domestic industry. However, they do change the composition of total imports, in favor of the countries that dump.

Finally, suppose industry revenue were replaced by capital market value as the measure of injury. In some situations the domestic industry may benefit from unfairly traded imports: the capital value of domestic firms (as a whole) increases with dumping. One possible example is where some domestic producers become importers. Suppose there are several varieties of a product (e.g., different qualities). Some domestic firms find it advantageous to stop producing lower quality varieties in their U.S. plants and instead source them offshore. They continue to market a full line. These firms may gain from dumping owing to their import operations. However, those domestic firms who do not go offshore would be injured by dumping. Note that U.S. law provides that the definition of domestic industry can be adjusted to exclude the importing activities of domestic producers. Under the "related parties" provision (19 U.S.C. sec. 1677(4)(B)) the USITC has the discretion to exclude such importing firms from its definition of the domestic industry.

[66] There may also be domestic workers in related industries who benefit from unfairly traded imports, e.g., in importing, wholesaling, or retailing. We do not estimate these indirect employment effects.

unfairly traded imports.[67]

Dumped or subsidized imports are reflected directly in lower prices for unfair imports (P_u^o to P_u^1 in Figure 3.1). They also cause price declines for the domestic product (P_d^o to P_d^1) and for fair imports (P_f^o to P_f^1). The gain to consumers equals the sum of the three areas: acfg + hijk + mnrt. This corresponds to the consumer gains from the lower prices of the domestic product, unfair imports, and fair imports respectively.[68]

Relevant time period. The effects of unfairly traded imports generally last longer for consumers than for workers. Consumers gain from the low prices generated by unfair practices for as long as the practices continue. If dumping goes on for five years the total consumer gain would be the sum of annual consumer gains over the five years.

In contrast, the impact of unfair imports on domestic employment lasts only as long as displaced workers remain unemployed. As the average (mean) duration of unemployment across all industries was less than 19 weeks during 1989-1994, the adverse effects of unfairly traded imports on domestic employment should be considerably less than one year.[69]

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[67] Consumer gain is based on partial equilibrium consumer surplus analysis. For background see Grossman (1990) or Tirole (1988, pp. 6-13). Three previous studies, Anderson (1993), the USITC (1995), and Gallaway, Blonigen, and Flynn (1999), also estimate the welfare effects of unfairly traded imports. Anderson uses a partial equilibrium model and considers a sample of eight AD matters decided in 1990 and 1991. The USITC (chapt. 4) examines eight cases using a partial equilibrium model and also considers all outstanding AD/CVD orders using a computable general equilibrium (CGE) model. Based on 1991 data the USITC estimates U.S. economy would gain $1.59 billion if all outstanding AD/CVD orders were removed. Gallaway et al. extend the USITC CGE model and estimate a net welfare gain of $3.95 billion from removing all AD and CVD orders in effect in 1993. The principal difference between the CGE estimates of the latter two studies (in addition to date) appears to be that Gallaway et al. estimate the economic rents foreign firms obtain by adjusting upward their export prices after AD duties are applied to their products. Our welfare estimates assume that dumping was not predatory. Note also that a recent empirical study by Shin (1998, p. 96) suggests that predatory dumping in the 1980s was rare. More generally, predatory pricing in the U.S. also appears to be rare. See Carlton and Perloff (2000, p. 342).

[68] For discussion of the measurement of consumer surplus in a comparable context see Morkre and Tarr (1980, chap. 2). They apply a method proposed by Burns (1973). Note that Willig (1979, p. 473) demonstrates that the change in multiproduct consumer surplus closely approximates the change in consumer welfare under the condition that each of the price changes has only a moderate effect on consumer welfare. As all of the cases examined here are relatively small (compared to total U.S. national income) it is appropriate to assume this condition holds for present purposes.

[69] The Bureau of Labor Statistics has unpublished data for duration of unemployment. However, this data is available only for broad industry aggregates and for the United States as a whole. These data generally show that unemployed workers remain out of work for less than four months. For example, for the United States during 1989-1994, the annual average (mean) duration of unemployment of workers was between 11.9 and 18.8 weeks. The range for the annual median duration of unemployment for this period was between 4.8 and 9.2 weeks. *Economic Report of the President, 1997*, p. 348.

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 (ϵ_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 (η_d and η_f respectively). Table A.2 in the Appendix gives the values of the elasticities used for each case. The principal source is USITC staff.[71]

For each unfair import case three collections of elasticity values are used: low (L), middle (M), and high (H). The middle set of values most accurately characterizes the responses by consumers and producers. We regard them as our principal results. However, as elasticity values are rarely known with precision the model was also solved using the high and low sets of values. These calculations reveal the robustness of our principal results.

Benchmarking. The model is then benchmarked to actual data for prices and quantities for a particular year. This involves calculating the values of the parameters that position the model to that year. In this chapter the model is benchmarked to the most recent complete year of the period of investigation.[72] Given the response and position parameters the model is fully specified and can be solved.[73]

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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^1) is, the fair price (P_u^o) equals (1 + m)(P_u^1). Thus there is full pass-through of the unfair margin. However, for AD cases where foreign firms engage in price discrimination dumping the assumption of exogenous unfair import price is not appropriate. For these cases, which are relatively rare, full pass-through of the dumping margin is also not appropriate.

Price discrimination occurs when a firm sells an identical product in two markets and is able to charge different prices in the two markets.[74] Firms that can price discriminate may also have significant monopoly power. When foreign firms dump in the U.S. market the impact on the domestic price of the unfairly traded import product is smaller than that reflected by the dumping margin. This is because if foreign firms ceased dumping they would optimally revise U.S. price upward and home price downward to reach a uniform price for both markets. The uniform price will be closer to the U.S. price the larger the ratio of foreign firms' sales to the U.S. market relative to sales to the home market. Thus there would be a partial pass-through of the dumping margin to the domestic price.[75]

B. ESTIMATES OF EFFECTS OF UNFAIRLY TRADED IMPORTS

Effects on Domestic Industry

Relative injury to domestic industry. Estimates of the injury to domestic industries from unfairly traded imports are given in Table 3.1. There are 132 cases for which the USITC made a

[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 because there are no unfair imports. Of the remaining 128 cases, only 63 have sufficient (public) data to calculate injury.[76] Included in the 63 cases are seven AD cases where the DOC found price discrimination. For these seven cases estimates are provided for both full and partial pass-through of the dumping margin (partial pass-through indicated by asterisk). As explained earlier, when partial pass-through is appropriate for a dumping case the true price effect of the unfair practice is smaller than the dumping margin. Accordingly, where these seven cases are involved, the subsequent discussion will refer to the partial pass-through results.[77] Finally, under each major heading in Table 3.1 (e.g., "Decline in Domestic Industry Revenue") there are three subheadings: L, M, and H to note estimates using the low, midpoint, and high elasticity parameters determined in the USITC investigation. Our principal results, and the focus of much of the subsequent discussion, are those under the M subheading. The results under the other subheadings will be discussed subsequently when we consider the sensitivity of our principal results.

Our principal findings for the adverse effect of unfairly traded imports on domestic industry revenue can be summarized as follows:

- injury is 5 percent or less for 32 cases (51 percent of the 63 cases);
- injury is greater than 5 and no more than 10 percent for 10 cases (16 percent);
- injury is greater than 10 and no more than 20 percent for 14 cases (22 percent); and
- injury is in excess of 20 percent for 7 cases (11 percent).

The cases with the largest injury, all AD cases, are as follows:

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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.

- 25.1 percent, pipe fittings from China and others (case 25280);
- 25.2 percent, stainless steel flanges from India and others (case 27240);
- 26.0 percent, garlic from China (case 28251);
- 26.8 percent, telephone systems from Japan and others (case 22379);
- 29.8 percent, silicon metal from Brazil and others (case 23859);
- 43.0 percent, sparklers from China (case 23870);
- 46.8 percent, benzyl paraben from Japan (case 23550).

The problem of unfairly traded imports for domestic industry appears to have increased over time. In our earlier report, Morkre and Kelly (1994, p. ix), we found that for the 1980-1988 period only 12 percent of the cases have estimated injury in excess of 10 percent. We now findthat for the 1989-1994 period fully 33 percent of the cases have injury in excess of 10 percent.

One of the principal reasons for the increase over time in the injury estimates is that dumping margins are higher. The majority of unfair import cases examined in both the 1980-1988 and the 1989-1994 periods involved AD, 67 percent and 90 percent respectively. The (simple) average dumping margin across cases nearly doubled between 1980-1988 and 1989-1994, from 30.5 percent to 54.0 percent.[78] However, as discussed subsequently, one of the reasons for higher dumping margins over time is the increased tendency for the DOC to base dumping margins on Best Information Available (BIA), which is usually based on allegations by domestic firms. This suggests that higher dumping margins over time may not be a reliable indicator of increased discriminatory or more injurious (to domestic firms) pricing by foreign firms.

Absolute injury from unfair imports. Table 3.2 has estimates of the total absolute decline in domestic industry revenues caused by unfairly traded imports. It is possible to perform these calculations for 54 of the 63 cases.

[78] The margins reported in the text are for the AD cases for which wecould calculate injury. However, DeVault (1996) finds a comparable trend forall final AD cases,that the average margin increased from 34.3 percent in 1980-89 to 49.4 percent in 1989-94. Unfortunately we cannot calculate a (import value) weighted average dumping margin across the cases forwhich we calculate injury because for several of them we only havepercent share of unfairly traded imports.

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);

[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 cumulative consumer gain with aggregate consumer gain from all unfair import cases. Aggregate consumer gains for 1989-1994 are at least $2.94 billion per year. This sum is obtained byadding the total consumer gain across the 54 cases for which we could estimate consumer gain.[82] Obviously, if we had the necessary data for other cases the total consumer gains would have been larger. The four massive steel cases alone have consumer gains of $1.16 billion, fully one-third of aggregate consumer gains over the period.

Finally, with respect to sources of consumer gains the main finding is that total gain is dominated by lower priced unfair imports. For all but four cases about 80 percent of total consumer gain comes from imported products. The four exceptions involve cases where domestic supply is relatively unresponsive to price. In these cases the decline in demand for the domestic

[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 caused by displacement. Labor adjustments tend, on average, to occur relatively quickly and end when displaced workers shift to alternative employments. Thus, for unfair import practices that last a long time the gain to consumers will correspondingly continue indefinitely, considerably longer than the period of time needed by workers to adjust to these practices.

For four of the 39 cases the annual gain per worker displaced is less than $100,000. The smallest is $27,100 for dumped sparklers from China (case 23870).[85]

At the other extreme, there are seven cases where annual consumer gain per worker exceeds $1 million:

- $1.02 million, dumped semifinished steels from Brazil (case 26622);
- $1.68 million, subsidized magnesium from Canada (case 25501);
- $1.70 million, dumped magnesium from Canada (case 25502);
- $1.76 million, dumped phthalic anhydride from Venezuela (case 28090);

[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.

- $3.30 million, dumped salmon from Norway (case 23712);
- $3.45 million, subsidized salmon from Norway (case 23711);
- $3.63 million, dumped silicon from Argentina, Brazil, and China (case 23859).

Five of these seven cases (excluding cases 26622 and 28090) involve agricultural or natural resource products where domestic supply is relatively unresponsive to price. In these instances the impact of unfair imports on domestic production, and therefore employment, tends to be relatively small. Not surprisingly, the ratio of consumer gain to number of displaced workers for the five cases is comparatively high.

Partial versus Full Pass-Through of Dumping Margin

For the seven dumping cases that involve price discrimination we report results for both partial and full pass-through of the dumping margin. Comparison of the two sets of results (in Table 3.1) confirms the expectation that estimated injury is higher for full pass-through than for partial pass-through. As explained earlier, the difference between the two sets of estimates depends on the importance of U.S. sales relative to home market sales for the foreign firms. If sales by foreign firms to the United States account for a relatively large proportion of their total sales, then the two sets of estimates will diverge appreciably. For example, in case 21502 U.S. sales were 43 percent of total sales.[86] Estimated injury was 1.8 times higher for full pass through than for partial pass through (31.6 percent versus 17.5 percent). By contrast, in case 24670 U.S. sales were only 20 percent of total sales and estimated injury was 1.1 times higher for full pass-through than for partial pass through (5.3 percent versus 4.7 percent).[87]

[86] USITC, *Digital Readout Systems and Subassemblies Thereof from Japan*, Pub. 2150, Jan. 1989, pp. A-53 and A-59. However, the importance of U.S. sales is overstated to an unknown extent. Data on unfair imports are confidential so we used total imports.

[87] USITC, *Coated Groundwood Paper from Belguim, Finland, France, Germany, and the United Kingdom*, Pub. 2467, Dec. 1991, pp. A-28 to A-30.

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 in the two demand elasticities. The implication is that precise knowledge of the two demand elasticities is less important for cases involving agricultural or natural resource products than for cases involving manufactured products.

Our estimates using alternative elasticity values are provided in Tables 3.1, 3.2, and 3.3. These tables give three sets of estimates for each case based on the low, mid, and high sets of elasticities. Table 3.1 reveals only six cases in which all three injury estimates are not uniformly above or below 10 percent.[88] But in only two of the six cases (21501* and 21502*) is there a substantial difference over the three elasticity sets. If we use the low elasticity set the estimated injury is relatively low, 4.4 and 4.9 percent respectively. However, if we use the mid elasticity set the estimated injury is relatively high, 13.4 and 17.5 percent respectively. These differences are due to the values used for the two basic demand elasticities (ϵ_A and σ). For these two cases the demand

[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).

A specific type of bias in DOC margins arises from Best Information Available (BIA). DOC uses BIA for the margin when a foreign firm does not supply the information requested in accordance with the timetable for the case.[91] DOC typically relies on the margin alleged by domestic firms in the AD petition for BIA. This margin tends to be very high. Table 3.5 summarizes the use of BIA by DOC. During 1989-1994 DOC investigated 229 foreign firms in the 63 cases involved in Table 2.3. BIA was used for 105 firms, or 46 percent of the total.[92] Comparable calculations for 1980-1988 indicate that DOC used BIA for only 83 of 398 companies investigated, or 21 percent of the total. Therefore, the increase in average dumping margin for 1989-1994 compared with 1980-1988 may be explained at least in part by increasing use of BIA over time.

Value at Factory Gate

Dumping and subsidy margins are computed by DOC on the value of the product at the (foreign) factory gate. The price of the product sold in the United States will be the price at the factory gate plus the costs of transportation (which includes freight and insurance) and ordinary tariffs (as opposed to AD or CVD duties). Although some of these costs will be proportional to the value of the product, others will not. Because of this, when the price of an unfairly traded product is raised by the amount of the margin at the factory gate, the price of the good in the United States will increase by proportionally less than the margin. However, our methodology assumes that price in the United States rise by the amount of the margin and therefore overstates somewhat the effect of unfair trade practices on domestic industry.[93]

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[91] For details about BIA see the Appendix.

[92] This total is the number of foreign firms whose entire margin was based on BIA. It ignores "part", which occurs for example where the firm has two or more models or product lines only one of which involves use of BIA. This is reported in the table as "part". Also see the Appendix.

[93] The extent of the overstatement depends on the importance of international freight charges (transportation plus insurance). A study by Hummels (1999) using 1994 data from the U.S. Census shows that freight charges vary considerably across categories of imports. They exceed 20 percent (of total import value) for the several products including: meat and meat products (21.1 percent), crude fertilizer (21.1 percent), natural gas (23.6 percent), coal and coke (28.6 percent). In general the overstatement equals the ratio of freight charges to total value of imports.

Market Structure

Finally, throughout this study we model the domestic industry as being perfectly competitive and the victim of unfair practices by foreign firms that, in the case of price discrimination dumping, behave as monopolists. This combination of assumptions maximizes the impact of unfair imports on the domestic industry.[94] This market structure is, however, often at considerable variance with reality. There are several unfair import cases where the domestic industry consists of a single firm or only a few firms.[95] There are also cases where foreign industries are highly fragmented and/or involve firms from several different countries.[96] Such circumstances would tend to make it more difficult for foreign firms to coordinate their activities sufficiently to behave as the tight cartels that our assumptions imply. These circumstances appear to be inconsistent with international price discrimination with large dumping margins.

D. CONCLUSIONS

In this chapter we use a computable partial equilibrium model to estimate various effects of unfairly traded imports. We consider all 132 cases for which the U.S. International Trade Commission reached a final determination during the period 1989 to 1994. Four of these cases do not involve injury to domestic industry because there are no unfair imports. Of the remaining cases data limitations restrict our sample to 63 usable cases.

Our primary objective is to estimate injury to domestic industry caused by dumped or

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[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 industry under perfect competition than under Bertrand competition. Moreover, the subsidy effect is more severe under Bertrand competition than under Cournot competition. Bertrand competition is more competitive-like than Cournot competition. Unpublished materials available from Morkre upon request.

[95] For example, there was one domestic producer in benzyl paraben (case 23550) and one in aspherical ophthalmoscopy (AO) lenses (case 24980). Both of these cases involve price dumping from Japan. However, we do not have sufficient information to estimate the effect of dumping in the second case.

[96] For example, industrial belts (case 21940) is a price dumping case involving the following countries: Israel, Italy, Japan, Singapore, South Korea, Taiwan, the United Kingdom, and West Germany.

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.

[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 paper describes a method for measuring causes of injury to a domestic industry in the context of an USITC escape clause investigation.[99] Data on domestic production, imports, and prices are used, along with elasticity estimates, to decompose the change in domestic production over a period of time into shifts in demand, domestic supply, and import supply when these demand and supply functions are linear.

We adapt this approach to the non-linear model that we used in the prior chapter to measure the effect of the unfair practice on the revenue of the domestic industry in the final year of investigation. Data on quantities and prices in the initial year of the investigation are used, along with the estimates of the elasticity parameters to "benchmark" the model, that is, compute the other parameters of the model. The model is also benchmarked using the quantity and price data from the final year of the investigation.

To measure the impact of a change in demand, a change in domestic supply, or a change in fair import supply, the relevant parameter that was benchmarked for the final year of the investigation is substituted into the model that was benchmarked for the initial year's data, and a

[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 a domestic input of high quality or an imported input of lower quality. Technological change in the downstream industry could make the production process less sensitive to input quality, and hence firms in this industry would be more willing to purchase the lower quality imported inputs relative to the domestic product. (iii) Finally, the perceptions of purchasers about the products could change. For example, a foreign producer may attempt to enter the U.S. market. At first, consumers may have

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[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_{s1} and b_{s3}, 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

[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. In the absence of such a change, domestic industry revenue would have been 4.8 percent higher, holding all other functions constant. This figure is 33 percent of the 14.5 percent decline in real domestic industry revenue over the period of investigation.

In 36 of the 44 cases, the data indicate that aggregate demand for the product in question

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 (with an "#") the entries for those factors that had the largest adverse effect on real domestic industry revenue. Changes in aggregate demand had the largest negative impact on domestic revenue in 20 cases, changes in relative quality in eight, changes in domestic supply in three, changes in fairly traded import supply in five, and changes in unfair import price in eight.

Table 4.3 presents measurements of the effects of changes in aggregate demand, relative quality, domestic supply, fair import supply (if applicable), and unfairly traded import price on the output of the 44 industries in our sample. The numbers are percentage changes in output (relative to initial year output) due to changes in each function, holding all other functions constant at their

initial year positions. The final column shows the actual change in output over the period of investigation, and is repeated from Table 4.1. The numbers in parentheses show the change in output due to the change in the function as a percentage of the total change over the period of investigation.

Changes in aggregate demand adversely affected domestic industry output in 36 cases, while changes in relative quality had an adverse impact in 29. Changes in domestic supply caused a decrease in domestic output in 10 cases, while changes in fair import supply adversely affected domestic output in 22 cases. In 37 cases the price of unfairly traded imports decreased in real terms over the period of investigation, and so caused domestic output to decrease.

The bottom line of Table 4.3 presents the average (median) over the 44 cases of the effect of changes in each function on domestic industry output. As was true for revenue, changes in aggregate demand had, on average, the largest negative effect on domestic industry output, -4.4 percent. Changes in unfair import price had the second largest negative effect on domestic industry output, an average of -2.7 percent. Changes in relative quality and in fair import supply caused domestic industry output to drop an average of -0.8 and -0.6 percent respectively. Changes in domestic supply benefitted the domestic industry.

As in Table 4.2, the factor that had the largest adverse effect on domestic output is emphasized (by "#") in the table. We find that change in aggregate demand had the largest adverse effect in 18 cases, change in relative quality and change in domestic supply in seven cases each, and change in unfair import price in eight. An adverse change in fair import supply had the largest negative effect on domestic output in four cases. Finally, with but four exceptions the factors that had the biggest adverse effect on domestic industry output were also the factors that had the biggest effect on domestic industry revenue.[102]

These calculations show that while domestic industries that have petitioned for relief from unfairly traded imports in recent years have typically seen their revenue and output decline in the

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

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 on the midpoints of the ranges reported by USITC staff for the elasticity parameters in our model.

The second dimension involves the issue of non-linearity discussed at the end of Section B. The results reported in Tables 4.2 and 4.3 were computed by substituting the relevant shift parameter for the final year of the investigation into the model benchmarked for the final year of the investigation. This allows us to perform the conceptual experiment of asking what would have happened if the one factor had not changed, while everything else in the model had.

Tables 4.2 and 4.3 also 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 elasticity parameter estimates that were the lower bound and upper bound of the range reported by the USITC. The lower (upper) bound estimates are shown in the L(H) subcolumns.

Tables 4.4 and 4.5 summarize the factors that had the largest negative impact on domestic industry revenue and output, respectively, given the different elasticity estimates. As can be seen

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.[103] Where two numbers are reported separated by a comma the first figure is the full pass through estimate, and the second is the partial pass through estimate. Where two numbers are reported separated by a slash the first

[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 "#") indicate that the injury estimate is higher than that of any individual cause of injury to that industry over the three year period of the investigation. For example, for Case No. 21501, the full pass through injury estimate was 21 percent, while the partial pass through injury estimate was 15.4 percent. Both of these numbers exceed the effect on domestic industry revenue of changes in any of the parameters, including the fall in aggregate demand, which was 14 percent.

On average, under the full pass through assumption domestic industry revenue would have been 5 percent higher while domestic industry output would have been 3.9 percent higher in the absence of the unfair practices. On average, under the partial pass through assumption domestic industry revenue would have been 4.6 percent higher while domestic industry output would have been 3.8 percent higher in the absence of the unfair practices.

For the reasons discussed in Chapter 3, the numbers in the final columns of Tables 4.6 and 4.7 are biased upwards. They should therefore be compared with the other numbers in these tables with caution.

Over all cases the average (median) change over time in aggregate demand had a greater adverse effect on domestic industry than that of the unfair trade practice or that of any other individual demand and supply factor. In addition in the majority of cases the negative effect of at least one individual cause on change in domestic industry revenue or output is greater than the effect of the unfair trade practice.

CHAPTER 5

CONCLUSION

In our earlier report, *EFFECTS OF UNFAIR IMPORTS ON DOMESTIC INDUSTRIES: U.S. Antidumping and Countervailing Duty Cases, 1980 to 1988*, we found that although all industries that had to compete with subsidized or dumped imports were injured by these practices, the effect of unfair practices on these industries' revenue was typically small during the period we studied. Our goal in the present report was (i) to extend this analysis for the period 1989 to 1994, and to the effects on consumers and workers in competing domestic industries, and (ii) to explain the reasons for changes in performance over time of those industries that have petitioned for relief from unfairly traded imports.

We find that our upper bound injury estimates for the period 1989-1994 are significantly higher than those for 1980-1988. This is true, despite the fact that the estimates of injury for 1989-1994 reported in Chapter 3 are tighter upper bounds than those for 1980-1988 that we reported in our earlier study.[104]

In our earlier report, we questioned why so many industries went to the expense of petitioning for relief from unfairly traded imports when the benefits appeared small as a percentage of their sales. We suggested several possible answers to this puzzle in that report.

Our results here, of fewer cases but higher estimated average injury, indicate other explanations. One is that the average injury suffered by industries that have petitioned for relief from unfairly traded imports from unfair trade practices may indeed have increased. Our earlier sample period started after a very significant change in the law against unfairly traded imports. The responsibility for computing countervailing and antidumping duties had been transferred from the Department of Treasury to the Department of Commerce, and, importantly, statutory deadlines for

[104] Two of the key parameters in these injury calculations are the supply and demand elasticities. In our earlier study we began by using elasticity parameters that would overestimate the injury to the domestic industry. We then attempted to obtain more precise elasticity estimates only for those cases that showed significant injury from unfair trade practices. However, for the period 1989-1994 (and subsequently) the ITC staff routinely estimated supply and demand elasticities in Title VII cases, and so the approach that we used in our earlier study was not necessary.

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 imports, but did not fully understand how the new law would be administered. As time went on, they learned that instances in which the duties would be small or the market share of the imports was small might not be worthwhile cases to bring. As a result, such cases are more likely to show up in the earlier period than the latter one. The other explanation is that the higher estimated injury in 1989-1994 compared to 1980-1988 is largely illusory. This is because the average dumping margins in 1989-1994, which are considerably higher, almost double the average dumping margins in 1980-1988, may be artificially inflated. The higher dumping margins are associated with an increased usage of best information available (BIA) by the Department of Commerce. If BIA margins are biased upward so are our injury estimates.

Most of the industries that have petitioned for relief from unfairly traded imports for which there is data on output and values have experienced some form of difficulty over the period of the U.S. International Trade Commission investigation. The reasons for these difficulties are varied, with declines in aggregate demand being the most important, followed by changes in unfair import price, in consumer perceptions of relative quality between domestic and imported products, fair import supply, and domestic supply. These findings are robust to changes in the underlying assumptions used to compute these estimates. Thus to argue that unfair trade practices are the cause of the problems experienced by these industries is incorrect.

Decomposing actual changes in domestic industry revenue and output over time into changes due to the demand, supply, and unfair import price factors also gives perspective for the magnitude of the estimated ("but for") injury to these same industries from subsidization or dumping as of the final year of USITC investigation. On average across all cases decline in aggregate demand had a greater adverse effect on domestic industry the unfair trade practice. However, on average the adverse effect of subsidization or dumping was greater than that of the

other individual demand and supply factors. Finally, in more than half of the cases in our sample the injury over the preceding three years from changes in one or more of the demand, supply, or unfair import price factors exceeded the injury due to the unfair practice.

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 were 97 USITC final reports, which covered 207 AD investigations and 49 CVD investigations. Each investigation identifies (i) a specific foreign exporter country, (ii) a particular product, and (iii) a specific practice, either dumping or subsidization, that is alleged to injure domestic producers. However, this report organizes data into cases, which may include several investigations.

II. Definition of a Case

The basic unit of observation in our data set is what we call a "case". In order to estimate the effect on domestic producers and consumers from dumped or subsidized imports it is necessary to specify the appropriate domestic product and the collection of allegedly unfair imports that are the source of concern. Cases are defined based on decisions of the USITC as to what these appropriate products and collections of countries are. As explained below, there are fewer cases than investigations during our six year period, 132 cases versus 256 investigations.

In many instances the definition of a case is straightforward. This occurs when a particular USITC report deals with (i) one domestic product, (ii) one foreign country supplying the unfair imports, and (iii) one unfair practice, either dumping or subsidization. However, there are many other instances that do not fit this mold. There are four types of complications.

First, the unfair imports from a particular country may involve both dumping and subsidization. The former reflect actions of foreign firms and the latter actions by foreign governments. To distinguish between the two it is necessary to have separate cases for each. Accordingly, we construct two cases for such situations, one for the AD investigation and one for the CVD investigation.

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

Third, a USITC report 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

[105] There are two types of cumulation. One cumulates unfair imports of two or more countries but all 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.

margin, subsidy margin, and domestic share of unfair imports. Additional information is also given about the dumping and subsidy margins, including whether the dumping or subsidy margins involve best information available (BIA) and whether the dumping margin is based on constructed value (CV).

Case number is based on USITC report number. The first four digits are the relevant USITC report number. Additional digits indicate the degree of complexity of the case.[108] The date of the final report is the month and year the USITC report was issued. Usually this is when the USITC made its final determination.[109]

Data type indicates the completeness of available data. The most complete type of data is designated by VQ, which indicates that both value and quantity are available for unfair imports, total imports, and domestic industry. When a case has complete data we are able to estimate all the effects of unfair imports as discussed in Chapter 3 and as well as the impact of the major demand/supply causal factors affecting the domestic industry. At the other extreme, data type INSUFF indicates that there was not sufficient data to estimate the effects of unfair imports and the causal factors. Other data types indicate intermediate situations where only some of the effects can be estimated.

The subsidy and dumping margins are based on the margins reported by DOC. If a case involves one country the margin shown in Table A.1 is the so-called "all others" margin.[110] If a case involves two or more countries the margin shown is a weighted average of the "all others" margins of the countries involved. The weights are value of unfair imports, when available; otherwise quantity weights are used. N/R indicates that either dumping or subsidy is not relevant

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[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 where DOC reports individual subsidy rates for particular foreign companies, in which case there is no country-wide rate. See the next section.

to the case. N/A indicates that it was not possible to calculate a weighted average margin.

Domestic market shares of unfair imports are provided on a value and quantity basis. A "." indicates that share data are confidential.

IV. Best Information Available: BIAD and BIAS

The "all others" margins reported by DOC are generally recognized to be biased upward for several reasons. One of the most important involves the use by DOC of "best information available" (BIA).

Under U.S. law, if a foreign firm or country under investigation for LTFV or CVD imports does not provide adequate information to DOC for it to calculate a dumping or subsidy margin, then the Department is required to use BIA to obtain a margin.[111] The BIA margin is often based on the margin alleged by the domestic industry in its petition.[112]

The general view by economists is that use of BIA imparts a significant upward bias to the margins.[113] This is supported by evidence presented by Baldwin and Moore (1991) and by DeVault (1993) that shows that antidumping cases involving BIA have on average substantially higher margins than those that do not.[114]

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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., 2d Sess., House Document 103-316, Vol. 1, p. 813.

[112] DOC uses a two-tier methodology to find BIA margins, which is based on a respondent's cooperation. If a company refuses to cooperate DOC assigns the highest margin from (i) the margins in the petition, (ii) the highest calculated margin of any respondent within the same country for which sufficient data was obtained to calculate a margin, or (iii) the estimated margin for the company calculated in the preliminary determination. If a company cooperates but fails to provide appropriate or timely data DOC assigns the higher margin of (i) the highest calculated margin for any respondent within the same country for which a margin could be calculated or (ii) the estimated margin for the company in the preliminary phase. Department of Commerce, "Final Determinations of Sales at Less than Fair Value: Antifriction Bearings (Other Than Tapered Roller Bearings) and Parts Thereof From the Federal Republic of Germany," 54 *Fed. Reg.* 19033 (May 4, 1989). The two-tier methodology was upheld by the reviewing court in "Allied-Signal v. United States," 996 F.2d, 1185 (Fed. Cir. 1993).

[113] See generally Boltuck and Litan (1991), especially Palmeter (1991b). See also Palmeter (1991a).

[114] Baldwin and Moore (1991), p. 270; DeVault (1993), p. 747. An alternative view, expressed by Terrence Stewart and Andrew Wechsler in Boltuck and Litan (1991, p. 333), is that foreign firms choose BIA when they believe it would give a smaller margin than using their own data. This view is also found in a court opinion. In "Rhone Poulenc v. United States," 899 F.2d 1185 (Fed. Cir. 1990), the review court held that the way DOC used BIA reflected a common sense approach to the current margin "...because if it were not so, the importer, knowing the rule, would have produced *current* information showing the margin to be less." (p. 1190) However, as emphasized by Palmeter (in Boltuck and Litan (1991, p. 70)), the administrative burden on foreign firms to comply with DOC requests for information are often so onerous, both in terms of burdensome detail and short administrative deadlines, that they have to accept BIA margins.

Antidumping Cases. Before May 1991, DOC used the same procedure to find the "all others" rate for all countries. Specifically, DOC did not distinguish between market economies and nonmarket economies (NMEs). With one qualification, the "all others" rate is a weighted average of the individual margins of companies investigated.[115] If the margin of a particular foreign firm is found to be zero or *de minimis* (i.e., less than 0.5 percent) it is excluded from the calculation of the weighted average. Subject to this qualification, the importance of the use of BIA for the "all others" rate depends on the number of foreign firms that are assigned BIA margins.[116] When more than two firms are investigated it is not possible to be more precise, to for example, indicate the relative export weight to apply to individual firm margins, because export data of individual firms are confidential.

Beginning in May 1991 the "all others" rate is calculated differently for non-market economies (NMEs).[117] For a market economy DOC presumes that foreign companies act independently and that dumping of exports to the United States is company specific.[118] In contrast, for a NME, DOC presumes that activities of foreign firms are coordinated by the central government.[119] All firms in the NME are assumed to be related; in effect DOC assumes there is one collective firm. Unless a foreign firm can demonstrate that this presumption is invalid only one dumping margin is sought, the margin for the country as a whole.[120] Moreover, DOC calculates

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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 calculates individual margins for one or more foreign firms. If an NME firm can demonstrate a sufficient degree of independence from central government control DOC will calculate an individual dumping margin, so-called "separate rate", for the firm. The "all others" rate is either calculated as above (for firms controlled by the central government) or it is the weighted average of the separate rates if the individual firms for which separate rates are calculated account for all the NME's exports to the U.S. However, the importance of BIA for the "all others" rate is the same as discussed in the text above because BIA is not used for separate rates (with the exception that BIA can be used for minor

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 The variable BIAS indicates the importance of BIA in CVD cases.[123] The focus in CVD cases is on foreign government programs that benefit foreign companies. The preference of DOC is to calculate a single county-wide rate that applies to all

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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).

firms.[124] This is found by calculating the (U.S. export) weighted average of subsidy rates for individual companies. However, if the rate for an individual company is materially different (from 1980 to 1985)[125] or significantly different (from 1985 to 1994)[126] than the country-wide rate, then the company receives its own separate rate. In these cases the reported "all others" subsidy rate is the weighted average of the subsidy rates for the remaining companies.

Between 1989 and 1994 DOC reported separate company rates in ten CVD cases involving 18 countries.[127] The highest individual company rate is greater than the reported "all others" rate for only six of these cases involving seven countries. There is often a considerable difference between an individual company rate and the "all others" rate in a case. For example, in case 22422, aluminum sulfate from Venezuela, the highest individual company subsidy rate is 38.4 percent while the "all others" rate is 19.0 percent.[128]

The assignment of values to BIAS depends on whether DOC uses a country-wide rate. If it does there are three possible values of BIAS. (1) BIAS=NONE indicates that DOC has not used BIA for any foreign government program. (2) BIAS=ALL indicates that all foreign government programs are assigned subsidy values based on BIA. (3) BIAS=PART indicates that DOC used BIA for at least one, but not all, of the foreign government programs.

If a separate subsidy rate is used for one (or more) companies, ultimately the same assignment of BIAS values is made as above. But it is first necessary to identify the relevant rate

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[124] The DOC preference for calculating a country-wide subsidy rates applied during the period 1980 to 1994. This changed in 1995 to implement the Uruguay Round. See the DOC's announcement of interim regulations for AD and CVD duties in 60 *Fed. Reg.* 25130 (May 11, 19945), esp. p. 25132. See also Gantz (1995), p. 71.

[125] "Countervailing Duties, Final Rules and Requests for Comments," 45 *Fed. Reg.* 4932 (Jan. 22, 1980), p. 4946.

[126] "Countervailing Duties, Proposed Rules and Request for Comments," 50, *Fed. Reg.* 242207 (June 10, 1985), p. 24225.

[127] The ten cases (and countries involved) are: 21930 (Brazil), 22172 (Canada), 22422 (Venezuela), 24109 (India), 25501 (Canada), 26110 (Brazil and the UK), 26641N (Belgium and Brazil), 26642N (Belgium, Brazil, and Italy), 26643N (Mexico), and 26644N (Belgium, Brazil, Germany, Italy, and the UK).

[128] The other five cases (and highest company margin vs. reported all others rate) are: 24109, steel wire rope from India (42.0 % vs. 36.9%); 26641N, hot-rolled flat steel from Belgium (24.2% percent vs. 1.1%) and Brazil (44.7% vs. 30.4%); 26642N cold-rolled flat steel from Belgium (24.2% vs. 1.0%); 26643N, corrosion-resistant flat steel from Mexico (47.8% vs. 5.7%); 26644N, steel plate from Belgium (27.2% vs. 6.5%). Note that in three cases DOC calculated a country-wide rates despite reporting individual company rates: 26110 (Brazil); 26642N (Brazil); 26644N (Brazil). In a fourth case, 26110 (Brazil and the UK), the USITC calculated country-wide subsidy rates for the countries. (USITC Staff Memo EC-Q-020).

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

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

investigates.[130] (3) CV=PART applies to intermediate cases. One is where constructed value is used for one or more, but not all, foreign firms. Another is where the product is comprised of several models or varieties. DOC may use CV for some, but not all, models.[131] It is not possible to gauge the importance of constructed value in PART cases because exports of individual firms are confidential.

VI. Elasticities Used

The values of the three elasticities used to apply our model to each caseare given in Table A.2. Because the results of our model may depend crucially on the particular values used for these elasticities we have taken care to examine the sensitivity of our results to the use of alternative elasticity values. This is accomplished by using three different values for each elasticity for each case. We believe the mid value is the best or most accurate value. The low and high values test for sensitivity.

The sources for the first two elasticities, the elasticity of demand for the composite product and the elasticity of substitution between domestic and imported products, are the "Elasticity Memos" prepared by USITC staff. The third, the elasticity of supply of domestic industry, depends on the type of industry relevant to a case. The values used reflect the feature that supply is generally more elastic for manufacturing industries than for agricultural or natural resources industries. For details see Morkre and Kelly (1994), Appendix D.

[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 Determination of Sales at Less than Fair Value: Certain Carbon and Alloy Steel Wire Rod from Canada," 59*Fed. Reg.* 18791 (April 20, 1994).

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FIGURE 3.1
EFFECTS OF UNFAIR IMPORTS

Certain foreign firms price unfairly (as set forth in U.S. law) by selling in the U.S. market at price P_u^1 below th fair market price P_u^0 (Panel B). This causes U.S. consumers to substitute in favor of unfair imports and curtail purchases of the domestic product and other ("fair") imports, which is shown by declines in the demand for the domestic product (D_d to D_d' in Panel A) and for fair imports (D_f to D_f' in Panel C). The declines in prices of domestic product (P_d^0 to P_d^1) and fair imports (P_f^0 to P_f^1) have feedback effects on unfair imports, which causes its demand to decline (D_u to D_u' in Panel B).

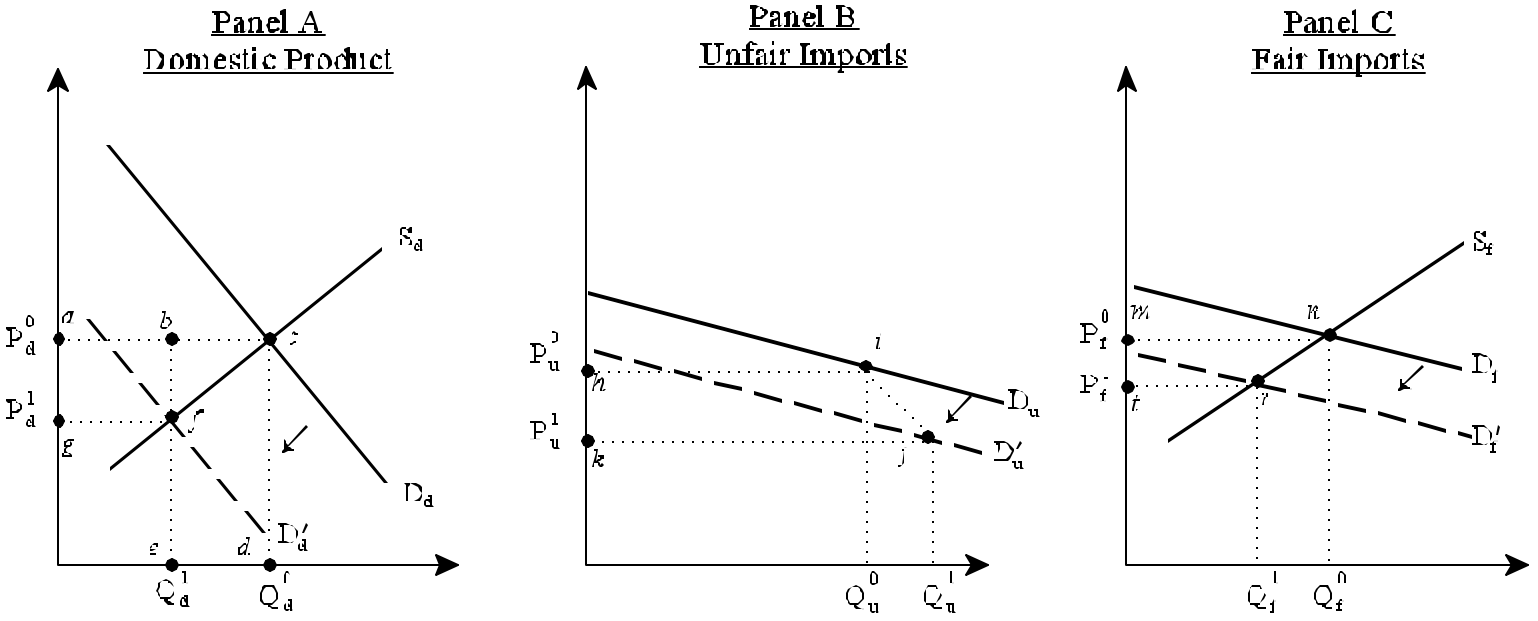

FIGURE 4.1
DECOMPOSITION OF CHANGE
IN DOMESTIC OUTPUT

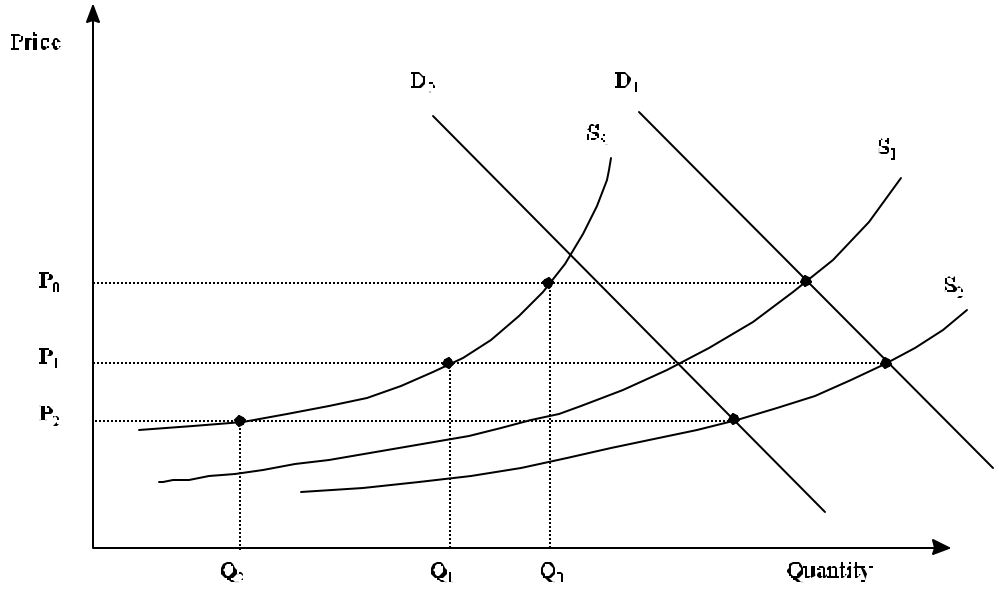

TABLE 2.1

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 2.2

DISPOSITION OF COUNTERVAILING DUTY 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	1	1	7	13	5	7	7	10	1	5	0	1	2	18	1	79
(% of Yr)	2%	7%	7%	57%	38%	19%	37%	48%	20%	45%	0%	20%	17%	46%	50%	21%
Final USITC Negative	50	1	5	1	1	6	4	5	1	4	0	1	0	18	0	97
(% of Yr)	76%	7%	5%	4%	8%	17%	21%	24%	20%	36%	0%	20%	0%	46%	0%	26%
Preliminary USITC Negative	3	0	47	1	3	6	4	0	0	0	2	0	6	2	1	75
(% of Yr)	5%	0%	47%	4%	23%	17%	21%	0%	0%	0%	67%	0%	50%	5%	50%	20%
Final ITA Negative	0	0	1	4	3	2	2	2	3	2	1	2	1	0	0	23
(%of Yr)	0%	0%	1%	17%	23%	6%	11%	10%	60%	18%	33%	40%	8%	0%	0%	6%
Other	12	12	39	4	1	15	2	4	0	0	0	1	3	1	0	94
(% or Yr)	19%	86%	39%	17%	8%	42%	11%	19%	0%	0%	0%	20%	25%	3%	0%	26%
Year End Total	66	14	99	23	13	36	19	21	5	11	3	5	12	39	1	368

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 Value	Unfair Imports Qty.	Total Imports Value	Total Imports Qty.	Commerce Dept. Margin Dumping	Commerce Dept. Margin Total Subsidy [Export Subsidy]	Apparent Domestic Consumption (1992 $Millions)	Domestic Industry Production Workers (Number)
		(----------Percent----------)				(-------Percent-------)			
21501: Dumped consols for digital readouts (DROs) from Japan	1/4/89	N.A.	N.A.	29.4	31.8	51.0	N.R.	17.6	102(2)
21502: Dumped transducers for DROs from Japan	1/4/89	N.A.	N.A.	55.5	51.0	51.0	N.R.	21.0	175(2)
21699: Dumped light-walled rectangular steel pipe from Argentina and Taiwan	3/15/89	7.1	10.2	21.1	27.9	42.4	N.R.	215.7	426
21830: Dumped headwear from China	4/26/89	14.0	29.3	49.9	72.7	21.4	N.R.	427.5	4,895
21851: Dumped and subsidized ball bearings from Japan, W.Germany, and seven other countries	5/2/89	23.7	N.A.	26.5	N.A.	59.3	1.1 [0.9]	1,926.3	11,681
21852: Dumped and subsidized spherical roller bearings from W.Germany, France and six other countries	5/2/89	12.2	N.A.	13.5	N.A.	49.5	0.0005 [0]	268.3	1,658
21853: Dumped cylindrical roller bearings from W.Germany, France, and four other countries	5/2/89	10.3	N.A	10.6	N.A.	48.5(3)	N.R.	247.8	1,931
21854: Dumped needle roller bearings from France, W.Germany, and three other countries	5/2/89	8.6	N.A.	N.A.	N.A.	128.5(3)	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: Unfair Imports Value (----Percent----)	Unfair Imports Qty. (----Percent----)	Total Imports Value (----Percent----)	Total Imports Qty. (----Percent----)	Commerce Dept. Margin Dumping (-------Percent-------)	Commerce Dept. Margin Total Subsidy [Export Subsidy] (-------Percent-------)	Apparent Domestic Consumption (1992 $Millions)	Domestic Industry Production Workers (Number)
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: Unfair Imports Value (----------Percent----------)	Unfair Imports Qty. (----------Percent----------)	Total Imports Value (----------Percent----------)	Total Imports Qty. (----------Percent----------)	Commerce Dept. Margin Dumping (-------Percent-------)	Commerce Dept. Margin Total Subsidy [Export Subsidy] (-------Percent-------)	Apparent Domestic Consumption (1992 $Millions)	Domestic Industry Production Workers (Number)
22770: Dumped steel pails from Mexico	4/23/90	10(5)	N.A.	N.A.	N.A.	75.6	N.R.	244.6	1,030
23050: Dumped cement and clinker from Mexico	4/23/91	N.A.	15.9	N.A.	30.3	60.4	N.R.	N.A.	3,593
23550: Dumped benzyl paraben from Japan	1/28/91	61	62	76	77	126	N.R.	N.A.	N.A.`
23711: Subsidized salmon from Norway	3/25/91	62.5	60.2	93.8	92.5	N.R.	2.3 [0]	184.7	265
23712: Dumped salmon from Norway	3/25/91	62.5	60.2	93.8	92.5	23.8	N.R.	184.7	265
23760: Dumped cement and clinker from Japan	4/23/91	17.2	25.7	20.4	29.7	62.2	N.R.	437.4	960
23830: Dumped polyester ("PET") film from Japan and S.Korea	5/22/91	15.8	14.0	19.5	17.3	6.0	N.R.	1,093.9	N.A.
23859: Dumped silicon metal from Argentina, Brazil, and China	5/22/91	23.4	28.0	28.9	33.3	108.0	N.R.	258.7	571
23870: Dumped sparklers from China	5/29/91	48.1	76.1	51.3	78.1	75.9	N.R.	3.3	59
24109: Dumped and subsidized steel wire rope from Canada, China and five other countries	8/8/91	7.9	9.9	31.2	37.5	56.8	2.4 [2.4]	334.8	1,825
24611: Dumped ceiling fans from China	11/22/91	23.7	33.8	83.7	95.7	2.0	N.R.	519.5	415

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 Value (Percent)	Unfair Imports Qty. (Percent)	Total Imports Value (Percent)	Total Imports Qty. (Percent)	Commerce Dept. Margin Dumping (Percent)	Commerce Dept. Margin Total Subsidy [Export Subsidy] (Percent)	Apparent Domestic Consumption (1992 $Millions)	Domestic Industry Production Workers (Number)
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	10/20/92	0.5	0.7	35.5	36.9	21.7	N.R.	1,132.2	2,605
26019: Dumped SS butt-weld pipe fittings from S.Korea and Taiwan	2/9/93	19.8	26.5	48.8	63.1	47.3	N.R.	61.1	299
26110: Dumped and subsidized lead/bismuth bar and rod from Brazil, France, Germany and the UK	3/2/93	19.4	20.5	23.8	25.1	58.6	14.5 [0]	449.0	1,509

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 Value (Percent)	Unfair Imports Qty. (Percent)	Total Imports Value (Percent)	Total Imports Qty. (Percent)	Commerce Dept. Margin Dumping (Percent)	Commerce Dept. Margin Total Subsidy [Export Subsidy] (Percent)	Apparent Domestic Consumption (1992 $Millions)	Domestic Industry Production Workers (Number)
26130: Dumped steel wire rope from Mexico and S.Korea	3/8/93	10.3	N.A.	34.0	40.5	11.1	N.R.	318.6	1,591
26290: Dumped DRAMs from S.Korea	4/22/93	19.7	24.8	71.0	63.0	3.9	N.R.	3,385.4	6,016
26621: Dumped free-machining semifinished steels from Brazil	7/2/93	N.A.	N.A.	9.8	8.7	19.7	N.R.	353.6	892
26622: Dumped special quality semifinished steels from Brazil	7/2/93	N.A.	N.A.	6.5	7.1	19.7	N.R.	1,982.3	3,328
26623: Dumped free-machining HR bars from Brazil	7/2/93	N.A.	N.A.	15.2	15.5	27.0	N.R.	441.2	1,059
26624: Dumped special quality HR bars from Brazil	7/2/93	N.A.	N.A.	4.3	4.2	27.0	N.R.	1,986.6	3,652
26641(N): Dumped and subsidized HR flat steel from Canada, S.Korea and seven other countries	8/10/92	7.0	6.1	7.8	6.7	34.4	5.5 [0.01]	14,538	16,177
26642(N): Dumped and subsidized CR flat steel from Japan, Germany, and eleven other countries	8/10/93	8.1	6.5	8.6	6.9	35.0	7.4 [0.01]	11,257	12,254
26643(N): Dumped and subsidized corrosion-resistant flat steel from Japan, Canada, and nine other countries	8/10/93	17.0	16.1	18.3	17.3	32.3	4.0 [0.6]	7,826	9,942
26644(N): Dumped and subsidized steel plate from Canada, Sweden, and thirteen other countries	8/10/93	13.0	14.4	14.2	15.9	47.2	9.6 [0.01]	1,952	3,515
26711: Dumped iron waterworks fittings from China	8/11/93	4.4	6.6	7.2	10.0	127.4	N.R.	N.A.	1,740

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 Value (Percent)	Unfair Imports Qty. (Percent)	Total Imports Value (Percent)	Total Imports Qty. (Percent)	Commerce Dept. Margin Dumping (Percent)	Commerce Dept. Margin Total Subsidy [Export Subsidy] (Percent)	Apparent Domestic Consumption (1992 $Millions)	Domestic Industry Production Workers (Number)
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 2.3 (Concluded)

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 Value (Percent)	Unfair Imports Qty. (Percent)	Total Imports Value (Percent)	Total Imports Qty. (Percent)	Commerce Dept. Margin Dumping (Percent)	Commerce Dept. Margin Total Subsidy [Export Subsidy] (Percent)	Apparent Domestic Consumption (1992 $Millions)	Domestic Industry Production Workers (Number)
28160: Dumped pencils from Thailand	10/5/94	0.2	0.4	23.7	31.5	115.5	N.R.	201.2	1,385
28251: Dumped garlic from China	10/26/94	22.1	35.2	41.6	54.5	376.7	N.R.	90.7	1,087
28370: Dumped pencils from China	10/26/94	10.8	22.1	23.7	31.5	44.7	N.R.	201.2	1,835

Notes:

N.A. = Not available.
N.R. = Not relevant.
CR = Cold rolled; HR = Hot rolled; SS = Stainless steel.
Except for Commerce Department margins, data are from most recent complete year in the period of investigation, unless otherwise indicated.
(1) Date of vote by USITC on final investigation. If a case involves several investigations that were voted on at different times, the date shown is that for the first final vote.
(2) Partial coverage of domestic industry. Extent of coverage confidential.
(3) Weighted average calculated to give upper bound.
(4) Data for latest available year.
(5) Upper bound.
Data from various reports by U.S. International Trade Commission (Publication number of USITC report given by first four digits of case numbers), various USITC memoranda by staff of Division of Applied Economics ("Elasticity Memos")

TABLE 3.1
EFFECTS OF UNFAIR IMPORTS ON DOMESTIC INDUSTRY AND EMPLOYMENT

Case No./Product/Country	Decline in Domestic Industry Revenue			Decline in Domestic Industry Employment					
	(----------Percent----------)			(----------Percent----------)			(-----Numberof Workers-------)		
	L	M	H	L	M	H	L	M	H
1989 cases									
21501/DRO Consols/Japan	8.8	17.4	23.5	--	N.A.	--	--	N.A.	--
21501*/DRO Consols/Japan	4.4	13.4	20.3	--	N.A.	--	--	N.A.	--
21502/DRO Consols/Japan	15.8	31.6	43.6	--	N.A.	--	--	N.A.	--
21502*/DRO Consols/Japan	4.9	17.5	27.3	--	N.A.	--	--	N.A.	--
21699/LWR Steel Pipe/Taiwan+	2.5	3.9	4.7	2.0	3.5	4.4	8	15	19
21830/Headwear/China	2.1	2.4	3.3	1.8	2.3	3.2	87	110	157
21851/Ball Bearings/Japan+	18.3	20.0	20.7	--	N.A.	--	--	N.A.	--
21852/Spherical Bearings/W.Germany+	8.9	9.7	10.1	--	N.A.	--	--	N.A.	--
21853/Cylindrical Bearings/W.Germany+	7.4	8.1	8.5	--	N.A.	--	--	N.A.	--
21854/Needle Bearings/France+	10.7	10.0	9.3	--	N.A.	--	--	N.A.	--
21930/Steel Wheels/Brazil	9.3	10.6	11.1	8.1	10.2	11.3	223	281	313
21940/Industrial Belts/Israel+	5.8	8.1	8.7	--	N.A.	--	--	N.A.	--
22130/Motorcycle Batteries/Taiwan	3.8	5.2	6.6	--	N.A.	--	--	N.A.	--
22130*/Motorcycle Batteries/Taiwan	0.7	1.5	2.1	--	N.A.	--	--	N.A.	--
22160/MA Uniforms/Taiwan	3.2	3.8	4.5	3.0	4.0	5.0	2	2	3
22160*/MA Uniforms/Taiwan	1.1	1.3	1.6	1.0	1.4	1.7	1	1	1
22171/Steel Rails/Canada	2.4	2.8	3.1	--	N.A.	--	--	N.A.	–

TABLE 3.1 (Continued)

EFFECTS OF UNFAIR IMPORTS ON DOMESTIC INDUSTRY AND EMPLOYMENT

Case No./Product/Country	Decline in Domestic Industry Revenue			Decline in Domestic Industry Employment					
	(----------Percent----------)			(----------Percent----------)			(-------Numberof Workers-----)		
	L	M	H	L	M	H	L	M	H
1989 cases									
22172/Steel Rails/Canada	4.2	4.2	4.2	--	N.A.	--	--	N.A.	--
22180/Pork/Canada	0.3	0.4	0.7	0.05	0.1	0.2	7	16	33
22379/Telephone Systems/Japan+	24.6	26.8	27.8	--	N.A.	--	--	N.A.	--
1990 cases									
22530/Door Locks/Taiwan	1.9	2.2	2.6	1.6	2.1	2.6	56	73	88
22530*/Door Locks/Taiwan	0.6	0.8	0.9	0.5	0.7	0.9	19	25	31
22570/Mechanical Presses/Japan	11.4	16.6	21.9	--	N.A.	--	--	N.A.	--
22770/Steel Pails/Mexico	6.7	6.5	6.5	--	N.A.	--	--	N.A.	--
23050/Cement/Mexico	17.7	17.4	16.8	17.2	18.4	18.6	618	663	670
1991 cases									
23550/Benzyl Paraben/Japan	46.3	46.8	46.6	--	N.A.	--	--	N.A.	--
23711/Salmon/Norway	1.3	1.3	1.5	0.2	0.4	0.6	1	1	2
23712/Salmon/Norway	11.8	11.5	12.4	1.9	3.3	5.8	5	9	15
23760/Cement/Japan	19.3	18.8	18.2	15.8	16.9	17.1	152	162	164

TABLE 3.1 (Continued)
EFFECTS OF UNFAIR IMPORTS ON DOMESTIC INDUSTRY AND EMPLOYMENT

Case No./Product/Country	Decline in Domestic Industry Revenue			Decline in Domestic Industry Employment					
	(----------Percent----------)			(----------Percent----------)			(-------Numberof Workers-----)		
	L	M	H	L	M	H	L	M	H
1991 cases									
23760*/Cement/Japan	19.2	18.8	18.1	15.8	16.9	17.0	151	162	163
23830/PET Film/Japan	2.1	4.2	6.0	--	N.A.	--	--	N.A.	--
23859/Silicon Metal/Brazil+	29.6	29.8	30.0	2.9	5.5	9.7	17	31	56
23870/Sparklers/China	47.0	43.0	40.5	49.3	47.1	45.2	29	28	27
24109/Wire Rope/Canada+	5.3	6.0	6.5	4.4	5.4	6.1	80	99	112
24611/Ceiling Fans/China	1.2	1.2	1.3	0.9	1.0	1.2	4	4	5
24670/Groundwood Paper/Finland+	4.7	5.3	5.8	4.0	5.0	5.8	367	458	529
24670*/Groundwood Paper/Finland+	4.0	4.7	5.3	3.4	4.4	5.3	311	401	479
1992 cases									
24870/Shop Towels/Bangladesh	0.9	1.1	1.4	0.7	1.0	1.2	2	3	4
24970/Antimony/China	5.0	6.0	6.8	--	N.A.	--	--	N.A.	--
25280/Pipe Fittings/China+	21.5	25.1	27.7	--	N.A.	--	--	N.A.	--
25300/Lumber/Canada	4.2	3.9	4.0	1.1	1.9	3.1	314	511	850
25501/Magnesium/Canada	14.0	12.0	11.3	0.8	1.3	2.1	14	22	35
25502/Magnesium/Canada	18.8	15.8	14.5	1.2	1.8	2.8	19	29	46
25641/Standard Pipe/S.Korea+	9.3	11.2	13.0	8.5	11.5	14.2	221	300	371
25644/Standard Pipe/Romania	0.2	0.2	0.2	0.1	0.2	0.2	4	5	6

TABLE 3.1 (Continued)

EFFECTS OF UNFAIR IMPORTS ON DOMESTIC INDUSTRY AND EMPLOYMENT

Case No./Product/Country	Decline in Domestic Industry Revenue			Decline in Domestic Industry Employment					
	(----------Percent----------)			(----------Percent----------)			(-------Numberof Workers-----)		
	L	M	H	L	M	H	L	M	H
1993 cases									
26019/SS Pipe Fittings/Taiwan+	11.5	16.7	20.3	9.4	15.8	21.0	28	47	63
26110/LB Steel Bar & Rod/Brazil+	13.2	14.6	15.5	11.6	14.3	16.2	175	216	244
26130/Wire Rope/S.Korea+	1.9	2.5	3.1	--	N.A.	--	--	N.A.	--
26290/DRAMs/S.Korea	3.3	3.9	4.8	--	N.A.	--	--	N.A.	--
26621/FM Semifinished Steels/Brazil	3.9	4.7	5.3	3.5	4.6	5.6	31	41	50
26622/SQ Semifinished Steels/Brazil	0.7	0.7	0.8	0.7	0.7	0.9	22	24	29
26623/FM HR Bars/Brazil	7.4	8.8	9.9	7.3	9.5	11.4	77	101	120
26624/SQ HR Bars/Brazil	2.2	2.5	2.8	1.9	2.4	2.9	70	89	104
26641(N)/HR Flat Steel/Canada+	4.5	4.8	5.1	4.1	4.7	5.3	656	766	853
26642(N)/CR Flat Steel/Japan+	3.6	4.0	4.4	3.2	3.9	4.5	392	481	556
26643(N)/Corrosion-Resistant Steel/Japan+	6.2	6.8	7.4	5.7	6.8	7.8	564	674	773
26644(N)/Steel Plate/Canada+	10.5	10.8	11.1	9.3	10.5	11.4	326	368	399
26711/Waterworks Fittings/China	4.0	4.3	4.4	--	N.A.	--	--	N.A.	--
26712/Iron Glands/China	3.7	4.0	4.1	--	N.A.	--	--	N.A.	--
26880/Ferrosilicon/Egypt	0.5	0.7	0.7	0.4	0.6	0.7	3	4	5
27049/Wire Rod/France+	2.0	3.6	7.4	1.6	3.2	7.2	22	44	99

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/Spherical Bearings/W.Germany+	22.53	24.82	26.04	18.92	22.67	24.86	3.61	2.15	1.18
21853/Cylindrical Bearings/W.Germany+	17.82	19.57	20.50	14.95	17.86	19.57	2.88	1.71	0.94
21854/Needle Bearings/France+	--	N.A.	--	--	N.A.	--	--	N.A.	--
21930/Steel Wheels/Brazil	66.74	76.90	81.38	56.06	70.26	77.72	10.68	6.64	3.66
21940/Industrial Belts/Israel+	18.27	26.26	28.45	15.30	23.97	27.15	2.97	2.30	1.30
22130/Motorcycle Batteries/Taiwan	0.97	1.36	1.76	0.81	1.24	1.68	0.16	0.12	0.08
22130*/Motorcycle Batteries/Taiwan	0.18	0.38	0.53	0.15	0.34	0.50	0.03	0.03	0.02
22160/MA Uniforms/Taiwan	0.12	0.15	0.17	0.10	0.13	0.16	0.02	0.01	0.01
22160*/MA Uniforms/Taiwan	0.04	0.05	0.06	0.03	0.05	0.06	0.01	0.0#	0.0#
22171/Steel Rails/Canada	--	N.A.	--	--	N.A.	--	--	N.A.	–

TABLE 3.2 (Continued)

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									
22172/Steel Rails/Canada	--	N.A.	--	--	N.A.	--	--	N.A.	--
22180/Pork/Canada	--	N.A.	--	--	N.A.	--	--	N.A.	--
22379/Telephone Systems/Japan+	298.59	333.89	352.45	254.50	307.65	338.14	44.09	26.24	14.31
1990 cases									
22530/Door Locks/Taiwan	7.98	9.41	10.90	6.66	8.56	10.39	1.32	0.85	0.51
22530*/Door Locks/Taiwan	2.62	3.19	3.80	2.18	2.90	3.62	0.43	0.29	0.18
22570/Mechanical Presses/Japan	--	N.A.	--	--	N.A.	--	--	--N.A.	--
22770/Steel Pails/Mexico	15.76	15.37	15.26	13.21	14.02	14.55	2.55	1.35	0.70
23050/Cement/Mexico	--	N.A.	--	--	N.A.	--	--	N.A.	--
1991 cases									
23550/Benzyl Paraben/Japan	--	N.A.	--	--	N.A.	--	--	N.A.	--
23711/Salmon/Norway	0.15	0.15	0.17	0.02	0.04	0.07	0.13	0.12	0.10
23712/Salmon/Norway	1.53	1.48	1.61	0.22	0.37	0.65	1.31	1.10	0.96
23760/Cement/Japan	83.03	80.73	77.34	70.39	74.06	74.00	12.63	6.66	3.34

TABLE 3.2 (Continued)

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
1991 cases									
23760*/Cement/Japan	82.66	80.67	77.08	70.08	74.01	73.74	12.58	6.66	3.33
23830/PET Film/Japan	18.70	38.15	55.73	15.61	34.75	53.16	3.09	3.40	2.58
23859/Silicon Metal/Brazil+	77.27	77.91	78.65	8.20	14.97	25.40	69.07	62.94	53.25
23870/Sparklers/China	1.42	1.21	1.09	1.24	1.12	1.05	0.18	0.08	0.04
24109/Wire Rope/Canada+	13.01	14.82	15.97	10.89	13.51	15.24	2.12	1.31	0.74
24611/Ceiling Fans/China	1.00	1.02	1.11	0.83	0.73	1.05	0.17	0.09	0.05
24670/Groundwood Paper/Finland+	171.01	195.08	215.00	143.07	177.78	205.05	27.93	17.30	9.95
24670*/Groundwood Paper/Finland+	144.90	171.08	194.52	121.16	155.87	185.49	23.74	15.22	9.02
1992 cases									
24870/Shop Towels/Bangladesh	0.33	0.40	0.48	0.28	0.36	0.45	0.05	0.04	0.02
24970/Antimony/China	2.98	3.64	4.16	2.50	3.31	3.97	0.49	0.32	0.19
25280/Pipe Fittings/China+	13.79	16.84	19.30	11.72	15.50	18.51	2.07	1.34	0.78
25300/Lumber/Canada	317.23	292.32	301.49	44.56	71.92	119.11	272.66	220.39	182.38
25501/Magnesium/Canada	35.21	29.37	27.57	3.43	5.16	8.22	31.79	24.21	19.35
25502/Magnesium/Canada	50.10	40.54	36.63	5.00	7.25	11.06	45.10	33.29	25.58
25641/Standard Pipe/S.Korea+	74.62	92.34	108.75	62.68	84.39	103.91	11.94	7.95	4.84

TABLE 3.2 (Continued)

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
1992 cases									
25644/Standard Pipe/Romania	1.18	1.42	1.64	0.98	1.29	1.56	0.20	0.13	0.08
1993 cases									
26019/SS Pipe Fittings/Taiwan+	4.18	6.47	8.18	3.52	5.93	7.83	0.66	0.54	0.35
26110/LB Steel Bar & Rod/Brazil+	50.55	57.11	61.29	42.61	52.28	58.60	7.94	4.83	2.69
26130/Wire Rope/S.Korea+	4.23	5.56	6.86	3.53	5.06	6.54	0.70	0.50	0.32
26290/DRAMs/S.Korea	33.99	41.03	50.80	28.40	37.36	48.44	5.59	3.66	2.36
26621/FM Semifinished Steels/Brazil	12.90	15.60	17.98	10.79	14.18	17.14	2.11	1.38	0.83
26622/SQ Semifinished Steels/Brazil	13.97	13.69	15.76	11.65	12.45	15.01	2.31	1.24	0.75
26623/FM HR Bars/Brazil	30.11	35.95	41.02	25.25	32.82	39.16	4.86	3.13	1.86
26624/SQ HR Bars/Brazil	42.24	49.08	54.88	35.26	44.67	52.31	6.98	4.41	2.58
26641(N)/HR Flat Steel/Canada+	629.16	672.34	714.26	526.30	612.57	681.09	102.87	59.77	33.18
26642(N)/CR Flat Steel/Japan+	380.88	427.88	472.02	318.36	389.70	450.02	62.52	38.18	22.00
26643(N)/Corrosion-Resistant Steel/Japan+	425.34	464.70	507.85	356.34	423.79	484.53	69.00	40.91	23.31
26644(N)/Steel Plate/Canada+	197.16	203.42	209.87	168.88	185.87	200.42	31.36	17.54	9.44
26711/Waterworks Fittings/China	–	N.A.	–	–	N.A.	–	–	N.A.	–
26712/Iron Glands/China	–	N.A.	–	–	N.A.	–	–	N.A.	–
26880/Ferrosilicon/Egypt	0.69	0.89	0.99	0.57	0.81	0.94	0.11	0.08	0.05

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

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
1989 cases						
21501/DRO Consols/Japan	2.31	2.04	1.74	0.20	0.24	0.18
21501*/DRO Consols/Japan	1.54	1.46	1.34	0.10	0.18	0.15
21502/DRO Consols/Japan	5.20	4.73	4.08	0.29	0.40	0.35
21502*/DRO Consols/Japan	1.45	2.26	2.03	0.08	0.18	0.17
21699/LWR Steel Pipe/Taiwan+	6.05	5.16	4.41	0.72	0.62	0.40
21830/Headwear/China	12.88	11.72	10.73	0.77	0.49	0.35
21851/Ball Bearings/Japan+	258.35	212.93	181.69	52.83	32.21	17.71
21852/Spherical Bearings/W.Germany+	15.98	13.15	11.22	3.76	2.26	1.24
21853/Cylindrical Bearings/W.Germany+	12.27	10.09	8.60	2.97	1.78	0.98
21854/Needle Bearings/France+	–	N.A.	–	–	N.A.	–
21930/Steel Wheels/Brazil	41.74	35.87	31.12	11.13	7.00	3.88
21940/Industrial Belts/Israel+	23.18	19.26	16.08	3.05	2.39	1.36
22130/Motorcycle Batteries/Taiwan	0.85	0.80	0.75	0.16	0.12	0.08
22130*/Motorcycle Batteries/Taiwan	0.16	0.22	0.23	0.03	0.03	0.03
22160/MA Uniforms/Taiwan	0.17	0.15	0.14	0.02	0.01	0.01
22160*/MA Uniforms/Taiwan	0.06	0.05	0.05	0.01	0.0	0.0
22171/Steel Rails/Canada	–	N.A.	–	–	N.A.	-

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
1989 cases						
22172/Steel Rails/Canada	--	N.A.	--	--	N.A.	--
22180/Pork/Canada	--	N.A.	--	--	N.A.	--
22379/Telephone Systems/Japan+	345.23	302.59	276.58	49.95	30.54	16.91
1990 cases						
22530/Door Locks/Taiwan	5.15	4.42	3.88	1.33	0.86	0.52
22530*/Door Locks/Taiwan	1.69	1.50	1.35	0.44	0.29	0.18
22570/Mechanical Presses/Japan	--	N.A.	--	--	N.A.	--
22770/Steel Pails/Mexico	13.74	11.70	10.57	2.63	1.40	0.73
23050/Cement/Mexico	--	N.A.	--	--	N.A.	--
1991 cases						
23550/Benzyl Paraben/Japan	--	N.A.	--	--	N.A.	--
23711/Salmon/Norway	3.39	3.26	3.17	0.13	0.12	0.10
23712/Salmon/Norway	31.97	28.76	26.24	1.32	1.12	0.98
23760/Cement/Japan	40.77	31.89	27.46	13.87	7.36	3.69

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
1991 cases						
23760*/Cement/Japan	40.45	31.78	27.54	13.81	7.35	3.68
23830/PET Film/Japan	12.82	12.51	11.05	3.12	3.47	2.65
23859/Silicon Metal/Brazil+	126.51	114.20	98.52	70.19	64.85	56.10
23870/Sparklers/China	0.96	0.75	0.67	0.24	0.11	0.05
24109/Wire Rope/Canada+	13.68	11.42	9.87	2.17	1.35	0.76
24611/Ceiling Fans/China	3.24	2.88	2.67	0.17	0.09	0.05
24670/Groundwood Paper/Finland+	110.16	92.52	79.82	28.50	17.74	10.24
24670*/Groundwood Paper/Finland+	92.11	79.23	69.70	24.15	15.56	9.26
1992 cases						
24870/Shop Towels/Bangladesh	0.21	0.18	0.16	0.06	0.04	0.02
24970/Antimony/China	2.34	2.00	1.73	0.50	0.33	0.20
25280/Pipe Fittings/China+	28.43	24.04	20.82	2.30	1.54	0.93
25300/Lumber/Canada	447.62	391.34	349.62	273.47	221.45	183.83
25501/Magnesium/Canada	44.88	36.07	30.25	32.01	24.47	19.69
25502/Magnesium/Canada	63.45	49.36	40.03	45.53	33.77	26.16
25641/Standard Pipe/S.Korea+	60.51	52.85	46.53	12.44	8.40	5.19

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.
(1) total gain in consumer surplus from unfair imports and equals consumer surplus gain on unfairly traded imports, fairly traded imports (if any), and domestic product.
(2) gain in consumer surplus on domestic product.
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 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 3.4

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, Belgium, and three other countries	79.23	401	198,000
24870: Dumped shop towels from Bangladesh	0.181	2.86	63,300
25300: Subsidized softwood lumber from Canada	391.34	510.8	766,000

TABLE 3.4 (Continued)

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
25501: Subsidized magnesium from Canada	36.07	21.5	$1,680,000
25502: Dumped magnesium from Canada	49.36	29.1	1,700,000
25641: Dumped standard pipe from S.Korea, Brazil, and three other countries	52.85	299.7	176,000
25644: Dumped standard pipe from Romania	0.847	4.62	183,000
26019: Dumped SS butt-weld pipe fittings from S.Korea and Taiwan	5.53	47.3	117,000
26110: Dumped and subsidized lead/bismuth bar and rod from Brazil, France, Germany and the UK	42.78	216.4	198,000
26621: Dumped free-machining semifinished steels from Brazil	6.59	41.0	161,000
26622: Dumped special quality semifinished steels from Brazil	24.08	23.7	1,016,000
26623: Dumped free-machining HR bars from Brazil	16.20	100.6	161,000
26624: Dumped special quality HR bars from Brazil	20.41	89.1	229,000
26641(N): Dumped and subsidized HR flat steel from Canada, S.Korea and seven other countries	330.32	765.6	431,000
26642(N): Dumped and subsidized CR flat steel from Japan, Germany, and eleven other countries	308.35	480.8	641,000
26643(N): Dumped and subsidized corrosion-resistant flat steel from Japan, Canada, and nine other countries	411.50	674.2	610,000
26644(N): Dumped and subsidized steel plate from Canada, Sweden, and thirteen other countries	106.02	368.56	288,000

TABLE 3.4 (Concluded)

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
26880: Dumped ferrosilicon from Egypt	1.31	4.09	$320,000
27049: Dumped SS wire rod from Brazil, France, and India	11.49	43.6	264,000
27220: Dumped ferrosilicon from Brazil	11.01	39.8	277,000
27440: Dumped SS pipe from Malaysia	1.00	8.46	118,000
27611: Dumped and subsidized HR wire rod from Belgium, Brazil, Canada, and Germany	31.85	140.7	226,000
27612: Dumped and subsidized HR wire rod from Belgium, Canada, Germany, and Japan	43.41	53.7	808,000
28090: Dumped phthalic anhydride from Venezuela	1.61	0.917	1,756,000
28160: Dumped pencils from Thailand	0.268	1.15	233,000
28251: Dumped garlic from China	42.23	221.0	191,000
28370: Dumped pencils from China	7.06	43.1	164,000

Data:
Column (1) from Table 3.3, Column (2) from Table 3.1
*** indicates results for partial pass-through of dumping margin. All other results for full pass-through of dumping margin.**
CR = cold rolled.
HR = hot rolled.
SS = stainless steel.

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

TABLE 4.1 (Continued)

PERCENTAGE CHANGE IN DOMESTIC INDUSTRY PERFORMANCE OVER THE PERIOD OF INVESTIGATION

Case No.	Revenue	Output	Price
1991 Cases			
23870	-38.8	-46.4	14.3
24109	-0.6	-1.0	0.4
24611	-22.9	-19.4	-4.4
24670	-8.3	0.7	-9.0
1992 Cases			
24870	-14.2	-8.3	-6.4
24970	-20.4	4.9	-24.2
25300	-19.3	-9.9	-10.5
25501/2	-39.6	-18.8	-25.6
25641	-15.9	-0.9	-15.2
25644	-15.9	-0.9	-15.2
1993Cases			
26019	-24.9	-1.9	-23.5
26110	-30.2	-18.8	-14.1

TABLE 4.1 (Continued)

PERCENTAGE CHANGE IN DOMESTIC INDUSTRY PERFORMANCE OVER THE PERIOD OF INVESTIGATION

Case No.	Revenue	Output	Price
1993 Cases			
26290	-21.3	120.3	-64.3
26621	-7.1	2.2	-9.1
26622	-17.9	-2.0	-16.2
26623	-10.3	-1.2	-9.2
26624	-13.9	-3.0	-11.2
26641(N)	-11.7	-2.9	-9.1
26642(N)	-9.0	-0.5	-8.5
26643(N)	-8.5	2.5	-10.8
26644(N)	-28.4	-12.7	-18.0
26880	-32.7	-24.1	-11.3
27049	-11.6	-4.4	-7.5
1994 Cases			
27220	-32.7	-24.1	-11.3
27240	-13.6	-8.5	-5.6
27440	-17.5	1.1	-18.4

TABLE 4.1 (Concluded)

PERCENTAGE CHANGE IN DOMESTIC INDUSTRY PERFORMANCE OVER THE PERIOD OF INVESTIGATION

Case No.	Revenue	Output	Price
1994 Cases			
27611	-9.1	3.7	-12.4
27612	-9.1	3.7	-12.4
28090	-7.1	1.5	-8.5
28160	13.1	-9.9	25.6
28251	27.7	41.2	-9.6
28370	13.1	-9.9	25.6
Median	-12.7	-2.5	-9.1

NOTES:

For details about the countries and products involved in each case, see Table 2.3.
(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) bur rather a cumulation of cases for the product.

TABLE 4.2

RELATIVE CAUSES OF CHANGE IN DOMESTIC INDUSTRY REVENUE

(1) Case No.	(2) Aggregate Demand			(3) Relative Quality			(4) Domestic Supply			(5) Fair Import Supply			(6) Unfair Import Price			Change in Industry Revenue
	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H	
1989 Cases																
21501	-12.2 (84.1)	-12.3# (84.5)	-12.9 (88.6)	-0.6 (4.5)	0.5 (-3.5)	2.1 (-14.5)	-0.2 (1.2)	1.5 (-10.5)	4.4 (-30.3)	N.A.	N.A.	N.A.	-1.8 (12.7)	-4.8 (33.0)	-9.1 (62.4)	-14.5
21502	-3.3 (32.9)	-3.9 (39.0)	-4.7 (46.7)	-4.0 (40.3)	-1.1 (10.8)	2.5 (-25.4)	0.3 (-2.9)	2.9 (-29.3)	7.1 (-71.3)	N.A.	N.A.	N.A.	-3.3 (32.6)	-8.2# (81.8)	-14.9 (149.4)	-10.0
21699	10.2 (33.6)	16.9 (55.6)	23.2 (76.5)	16.2 (53.3)	15.3 (50.4)	16.0 (52.8)	1.8 (5.9)	-3.3# (-10.9)	-9.9 (-32.7)	2.2 (7.4)	2.2 (7.4)	1.8 (6.0)	-0.04 (-0.1)	-0.1 (-0.3)	-0.2 (-0.6)	30.4
21830	10.3 (182.6)	14.7 (260.1)	18.6 (328.5)	-7.0 (-124)	-5.7# (-133)	-7.6 (-135)	1.2 (20.6)	-2.9 (-50.8)	-7.6 (-134)	3.4 (60.8)	4.2 (73.7)	6.1 (108.0)	-0.7 (-12.5)	-0.9 (-15.9)	-1.4 (-24.4)	5.7
21930	-11.3 (67.3)	-9.9 (59.3)	-9.1 (54.1)	-8.5 (51.0)	-11.3# (67.3)	-14.5 (87.0)	-0.4 (2.3)	0.2 (-1.5)	2.3 (-13.6)	N.A.	N.A.	N.A.	1.5 (-9.2)	1.8 (-10.9)	2.0 (-12.1)	-16.7
22130	4.7 (-131)	5.0 (-139)	5.2 (-145)	-9.2 (253.1)	-11.3# (311.2)	-13.5 (371.9)	-1.3 (36.3)	-0.6 (15.9)	0.2 (-6.3)	N.A.	N.A.	N.A.	1.9 (-51.2)	2.6 (-71.6)	3.3 (-92.4)	-3.6
22160	-50.9 (93.7)	-48.7# (89.5)	-47.4 (87.1)	-16.4 (30.2)	-21.1 (38.9)	-26.9 (49.4)	-16.0 (29.4)	-20.2 (37.1)	-23.1 (42.5)	14.8 (-27.3)	16.8 (-30.9)	19.8 (-36.3)	9.2 (-16.9)	11.0 (-20.2)	12.8 (-23.6)	-54.4

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	
1990 Cases																
22530	-2.3 (23.2)	0.2 (-2.5)	1.7 (-17.4)	-2.5 (25.1)	-7.3# (73.6)	-11.0 (110.1)	-0.04 (0.4)	-0.2 (2.3)	<-0.01 (0.01)	-3.6 (36.0)	-2.5 (24.7)	-1.6 (16.1)	1.2 (-12.0)	1.4 (-14.3)	1.7 (-16.7)	-10.0
1991 Cases																
23711/2	5.7 (68.2)	-3.2 (-38.7)	-9.5 (-114)	-6.4 (-76.8)	-9.6 (-115)	-12.4 (-148)	40.8 (488.8)	56.1 (671.7)	75.3 (901.5)	-7.1 (-84.6)	-5.3 (-62.8)	-5.0 (-59.6)	-17.4 (-208)	-17.7# (-212)	-20.1 (-240)	8.4
23760	-6.3 (106.8)	-6.4# (108.1)	-6.3 (106.6)	-0.5 (8.2)	-2.4 (39.6)	-7.3 (122.4)	0.04 (-0.7)	0.7 (-11.6)	1.6 (-27.4)	3.0 (-50.6)	3.4 (-57.3)	3.9 (-65.7)	-3.1 (52.1)	-4.5 (76.1)	-6.2 (104.1)	-5.9
23830	-1.1 (15.7)	-4.0 (59.3)	-7.2 (106.9)	1.1 (-16.9)	6.2 (-93.2)	10.9 (-162)	-0.02 (0.3)	4.7 (-70.5)	9.6 (-144)	-0.6 (9.2)	-1.5 (22.4)	-3.0 (44.9)	-7.2 (107.8)	-18.4# (275.7)	-32.9 (491.8)	-6.7
23859	-0.6 (3.4)	-4.8 (25.1)	-7.0 (36.7)	-13.5 (71.0)	-5.2 (27.6)	0.8 (-4.4)	3.6 (-19.0)	0.6 (-2.9)	0.05 (-0.3)	17.4 (-91.5)	9.9 (-52.0)	6.7 (-35.0)	-12.5 (65.6)	-14.6# (76.5)	-18.4 (96.7)	-19.0
23870	-17.2 (44.3)	-14.7 (38.0)	-13.0 (33.4)	13.5 (-34.9)	22.2 (-57.3)	31.6 (-81.6)	-21.7 (56.1)	-30.8# (79.5)	-39.2 (101.2)	-0.3 (0.9)	-0.3 (0.8)	-0.3 (0.9)	-20.2 (52.0)	-24.4 (62.9)	-30.0 (77.4)	-38.8
24109	-3.8 (635.7)	-3.6# (590.1)	-3.6 (604.6)	3.7 (-610)	4.5 (-746)	5.7 (-941)	0.1 (-17.6)	-0.1 (18.4)	-0.3 (49.4)	0.9 (-155)	0.4 (-65.4)	-0.1 (22.1)	-1.1 (185.1)	-1.6 (263.2)	-2.1 (351.6)	-0.6

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	
1991 Cases																
24611	-3.4 (14.8)	-4.3 (18.8)	-5.6 (24.3)	-30.2 (131.8)	-32.0# (139.9)	-35.5 (154.9)	0.2 (-0.7)	4.2 (-18.3)	9.7 (-42.5)	13.5 (-59.0)	12.3 (-53.9)	13.0 (-56.7)	0.9 (-3.9)	0.9 (-3.9)	1.0 (-4.2)	-22.9
24670	-2.4 (29.2)	-3.2# (37.9)	-4.2 (51.0)	-0.2 (2.8)	-0.6 (7.2)	-0.6 (7.0)	-2.0 (23.5)	-0.03 (0.3)	2.1 (-24.7)	-2.1 (25.8)	-2.8 (33.7)	-3.8 (45.2)	-2.2 (26.5)	-3.0 (35.5)	-3.8 (45.9)	-8.3
1992 Cases																
24870	-6.1 (42.9)	-3.2 (22.3)	-2.0 (13.7)	-1.5 (10.5)	-6.0 (41.9)	-8.7 (61.5)	0.02 (-0.1)	2.9 (-20.2)	6.6 (-46.5)	-9.4 (66.2)	-11.9# (83.7)	-15.7 (110.6)	<0.01 (-0.06)	0.01 (-0.08)	0.01 (-0.1)	-14.2
24970	-3.8 (18.5)	-8.5 (41.8)	-12.1 (59.4)	1.2 (-5.8)	1.1 (-5.4)	-0.4 (2.2)	-13.0 (63.4)	-7.2 (35.4)	-1.6 (7.7)	-0.08 (0.4)	-0.5 (2.2)	-0.9 (4.4)	-8.0 (39.2)	-12.3# (60.2)	-17.7 (86.6)	-20.4
25300	-23.6 (122.2)	-17.5# (90.5)	-13.2 (68.5)	6.3 (-32.7)	1.3 (-6.7)	-3.4 (17.5)	-0.7 (3.4)	-2.1 (10.9)	-1.3 (6.7)	0.07 (-0.4)	0.06 (-0.3)	0.07 (-0.4)	-3.7 (19.1)	-3.5 (17.9)	-3.6 (18.9)	-19.3
25501/2	-26.5 (67.0)	-22.6# (57.0)	-23.5 (59.4)	-7.1 (18.0)	-6.7 (16.9)	-5.9 (14.8)	6.8 (-17.2)	-1.8 (4.6)	-2.7 (6.7)	N.A.	N.A.	N.A.	-19.1 (48.3)	-17.2 (43.4)	-18.4 (46.3)	-39.6
25641	-11.4 (71.5)	-12.5# (78.8)	-13.8 (86.6)	-4.9 (31.1)	-7.8 (49.1)	-11.5 (72.1)	3.3 (-20.7)	8.9 (-56.3)	15.2 (-95.5)	2.2 (-14.0)	1.8 (-11.2)	1.4 (-8.9)	-6.4 (40.4)	-8.7 (54.9)	-11.4 (71.6)	-15.9
25644	-12.1 (76.2)	-12.9# (81.5)	-14.0 (88.1)	-3.3 (20.8)	-6.1 (38.1)	-9.3 (58.3)	2.0 (-12.4)	7.6 (-47.8)	14.0 (-88.2)	-3.7 (23.3)	-6.5 (40.7)	-9.7 (61.2)	-0.1 (0.9)	-0.2 (1.2)	-0.3 (1.6)	-15.9

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.	N.A.	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 (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																
26643(N)	-2.3 (27.1)	-3.6 (41.7)	-4.6 (54.3)	-0.7 (8.8)	-1.1 (12.8)	-1.7 (20.1)	-3.1 (36.5)	-1.3 (14.8)	0.7 (-8.2)	0.5 (-6.4)	0.6 (-6.8)	0.6 (-7.3)	-3.3 (39.0)	-3.9# (45.7)	-4.6 (53.7)	-8.5
26644(N)	-19.1 (67.4)	-20.6# (72.6)	-22.4 (78.9)	-1.2 (4.3)	-0.4 (1.4)	0.5 (-1.7)	-2.6 (9.1)	-0.6 (2.2)	1.8 (-6.4)	-1.1 (4.0)	-2.0 (7.0)	-3.2 (11.2)	-9.6 (33.9)	-11.7 (41.4)	-14.2 (50.2)	-28.4
26880	-12.7 (38.9)	-10.5 (32.1)	-10.4 (31.9)	-14.0 (43.0)	-14.9# (45.7)	-15.0 (45.8)	-2.9 (8.8)	-0.9 (2.6)	3.2 (-9.9)	-5.9 (18.0)	-9.4 (28.8)	-13.9 (42.6)	-1.0 (3.0)	-2.7 (8.2)	-7.1 (21.6)	-32.7
27049	-3.7 (31.7)	-0.9 (7.9)	-2.1 (17.9)	-2.0 (17.6)	-3.9# (33.3)	-2.1 (17.9)	-2.4 (20.5)	-0.2 (1.9)	2.5 (-21.1)	-1.8 (15.5)	-3.4 (29.5)	-5.6 (48.6)	-1.2 (10.4)	-2.7 (23.1)	-4.8 (41.5)	-11.6
1994 Cases																
27220	-17.2 (52.7)	-14.8# (45.4)	-15.1 (46.2)	-9.7 (29.6)	-10.4 (31.8)	-9.5 (29.2)	-2.8 (8.7)	-0.7 (2.3)	3.4 (-10.4)	-3.9 (12.0)	-6.4 (19.7)	-9.7 (29.7)	-2.6 (8.0)	-4.8 (14.6)	-7.7 (23.5)	-32.7
27240	-7.2 (52.9)	-10.6 (77.6)	-14.1 (103.3)	44.2 (-325)	56.4 (-415)	69.0 (-507)	2.0 (-15.0)	4.6 (-33.6)	7.5 (-54.9)	-39.8 (292.5)	-49.8# (366.0)	-59.1 (434.3)	-11.6 (85.5)	-13.3 (97.9)	-15.6 (114.9)	-13.6
27440	-19.0 (108.4)	-19.3# (110.2)	-18.5 (105.9)	8.3 (-47.4)	-0.1 (0.9)	-10.8 (61.8)	-8.6 (49.4)	-2.8 (15.7)	3.4 (-19.6)	2.4 (-13.5)	2.3 (-13.3)	2.2 (-12.8)	<-0.01 (0.02)	<-0.01 (0.04)	<-0.01 (0.05)	-17.5
27611	-2.3 (25.8)	-5.4 (59.3)	-8.3 (91.4)	-1.0 (11.1)	-0.8 (8.5)	-0.7 (7.6)	-1.6 (17.9)	2.6 (-29.1)	7.2 (-79.5)	-0.3 (3.3)	-1.1 (12.5)	-2.1 (23.2)	-4.5 (49.2)	-5.9# (65.3)	-7.7 (85.2)	-9.1

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)

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	
1990 Cases																
22530	-1.9 (23.3)	0.2 (-2.7)	1.7 (-19.9)	-2.1 (25.1)	-6.7# (80.5)	-10.5 (126.1)	0.04 (-0.5)	0.7 (-8.0)	1.3 (-16.0)	-3.0 (36.1)	-2.2 (26.9)	-1.5 (18.4)	1.0 (-11.9)	1.3 (-15.5)	1.6 (-19.1)	-8.3
1991 Cases																
23711/2	0.8 (1.2)	-0.8 (-1.2)	-3.8 (-6.0)	-0.9 (-1.4)	-2.4 (-3.8)	-5.0 (-7.9)	69.9 (109.4)	79.1 (123.7)	97.8 (153.0)	-1.0 (-1.6)	-1.3 (-2.0)	-2.0 (-3.1)	-2.6 (-4.1)	-4.6# (-7.2)	-8.4 (-13.1)	63.9
23760	-5.3 (123.4)	-5.9# (136.0)	-6.0 (140.2)	-0.4 (9.4)	-2.1 (49.7)	-6.9 (161.1)	0.7 (-17.1)	1.8 (-41.9)	3.0 (-69.9)	2.5 (-58.0)	3.1 (-71.7)	3.7 (-86.2)	-2.6 (60.1)	-4.1 (95.6)	-5.9 (137.0)	-4.3
23830	-0.9 (-270)	-3.6 (-*)	-6.8 (-*)	0.9 (289.7)	5.7 (*)	10.3 (*)	6.3 (*)	11.4 (*)	17.0 (*)	-0.5 (-158)	-1.4 (-420)	-2.9 (-881)	-6.0 (-*)	-16.9# (-*)	-31.6 (-*)	0.3
23859	-0.06 (1.0)	-0.8 (14.7)	-2.0 (36.9)	-1.3 (23.6)	-0.9 (16.1)	0.2 (-4.3)	-3.4 (61.4)	-2.1 (37.3)	0.3 (-6.2)	1.5 (-26.5)	1.6 (-28.6)	1.9 (-33.5)	-1.2 (21.7)	-2.6# (46.7)	-5.6 (101.9)	-5.5
23870	-14.5 (31.3)	-13.5 (29.0)	-12.4 (26.7)	11.2 (-24.0)	20.0 (-43.1)	29.9 (-64.5)	-34.3 (73.8)	-40.2# (86.5)	-46.8 (100.8)	-0.3 (0.6)	-0.3 (0.6)	-0.3 (0.7)	-17.1 (36.8)	-22.4 (48.3)	-28.8 (62.1)	-46.4
24109	-3.2 (322.3)	-3.2# (325.8)	-3.5 (349.5)	3.1 (-307)	4.1 (-411)	5.4 (-543)	-0.4 (40.8)	-0.5 (55.2)	-0.7 (70.9)	0.8 (-78.1)	0.4 (-36.0)	-0.1 (12.7)	-0.9 (93.6)	-1.4 (145.2)	-2.0 (203.2)	-1.0

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)	-6.7 (-137)	-11.2# (-229)	-16.9 (-345)	4.9
25300	-3.6 (36.9)	-4.6 (46.1)	-5.4 (54.5)	0.8 (-8.6)	0.3 (-3.2)	-1.3 (13.5)	-7.2 (73.4)	-5.5# (56.2)	-2.5 (25.3)	0.01 (-0.1)	0.02 (-0.2)	0.03 (-0.3)	-0.5 (5.2)	-0.8 (8.6)	-1.4 (14.6)	-9.9
25501/2	-2.8 (14.7)	-4.2 (22.2)	-7.4 (39.2)	-0.7 (3.6)	-1.1 (6.1)	-1.7 (9.1)	-14.5 (77.0)	-11.9# (63.5)	-6.9 (36.8)	N.A.	N.A.	N.A.	-1.9 (10.2)	-3.1 (16.5)	-5.6 (29.9)	-18.8
25641	-9.6 (*)	-11.4# (*)	-13.1 (*)	-4.1 (482.9)	-7.1 (830.3)	-10.9 (*)	17.6 (-*)	25.4 (-*)	33.8 (-*)	1.9 (-216)	1.6 (-189)	1.3 (-157)	-5.4 (627.5)	-8.0 (930.0)	-10.9 (*)	-0.9
25644	-10.2 (*)	-11.8# (*)	-13.4 (*)	-2.8 (322.3)	-5.5 (644.5)	-8.8 (*)	16.4 (-*)	24.0 (-*)	32.5 (-*)	-3.1 (361.5)	-5.9 (689.0)	-9.3 (*)	-0.1 (14.0)	-0.2 (20.8)	-0.2 (28.5)	-0.9

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			Change in Industry Output
	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H	
1993 Cases																
26643(N)	-1.9 (-77.6)	-3.2 (-130)	-4.4 (-178)	-0.6 (-25.0)	-1.0 (-40.1)	-1.6 (-65.6)	7.5 (302.5)	9.9 (396.7)	12.3 (495.3)	0.5 (18.2)	0.5 (21.1)	0.6 (24.0)	-2.8 (-112)	-3.6# (-143)	-4.4 (-176)	2.5
26644(N)	-16.2 (128.0)	-18.9# (149.3)	-21.5 (169.4)	-1.0 (8.1)	-0.4 (2.8)	0.5 (-3.6)	12.9 (-102)	17.6 (-139)	22.1 (-174)	-0.9 (7.5)	-1.8 (14.3)	-3.0 (24.0)	-8.1 (63.8)	-10.7 (84.8)	-13.6 (107.5)	-12.7
26880	-10.7 (44.4)	-9.6 (39.8)	-10.0 (41.4)	-11.8 (49.2)	-13.7# (56.7)	-14.3 (59.4)	3.0 (-12.5)	7.9 (-32.8)	14.0 (-58.3)	-4.9 (20.4)	-8.6 (35.7)	-13.3 (55.2)	-0.8 (3.4)	-2.4 (10.1)	-6.7 (28.0)	-24.1
27049	-3.1 (69.4)	-0.8 (18.9)	-2.0 (44.7)	-1.7 (38.4)	-3.5# (79.3)	-2.0 (44.5)	3.8 (-85.7)	6.7 (-151)	10.0 (-225)	-1.5 (33.9)	-3.1 (70.1)	-5.4 (121.2)	-1.0 (22.8)	-2.4 (54.9)	-4.6 (103.5)	-4.4
1994 Cases																
27220	-14.6 (60.5)	-13.6# (56.4)	-14.4 (59.9)	-8.1 (33.7)	-9.5 (39.3)	-9.1 (37.8)	3.1 (-12.7)	8.0 (-33.3)	14.2 (-59.0)	-3.3 (13.7)	-5.9 (24.3)	-9.3 (38.5)	-2.2 (9.0)	-4.4 (18.1)	-7.3 (30.4)	-24.1
27240	-6.0 (71.1)	-9.7 (113.5)	-13.4 (158.1)	35.7 (-419)	50.2 (-590)	64.8 (-763)	5.1 (-60.2)	8.9 (-104)	12.7 (-149)	-34.5 (405.8)	-46.6# (547.8)	-57.3 (674.3)	-9.8 (115.2)	-12.2 (143.4)	-15.0 (175.9)	-8.5
27440	-16.1 (-*)	-17.7# (-*)	-17.7 (-*)	6.9 (627.2)	-0.1 (-12.4)	-10.3 (-942)	10.1 (918.7)	17.4 (*)	25.4 (*)	2.0 (179.8)	2.1 (192.4)	2.1 (195.4)	<-0.01 (-0.3)	<-0.01 (-0.6)	<-0.01 (-0.8)	1.1
27611	-2.0 (-52.6)	-4.9 (-132)	-7.9 (-213)	-0.8 (-22.6)	-0.7 (-18.9)	-0.7 (-17.7)	10.8 (289.2)	15.8 (424.9)	21.4 (574.1)	-0.2 (-6.6)	-1.0 (-27.7)	-2.0 (-53.9)	-3.7 (-100)	-5.4# (-145)	-7.4 (-198)	3.7

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	11.2	-0.3	-0.6	-0.9	-1.7	-2.7	-4.5	-2.5

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 4.4

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 4.4 (Concluded)

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
1994 Cases					
27440	L, M, H				
27611	H				L, M
27612	M, H		L		
28090	L, M, H				
28160				L, M, H	
28251				L, M, H	
28370			L, M, H		
Summary	21L	6L	5L	6L	6L
	20M	8M	3M	5M	8M
	20H	8H	3H	6H	7H

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 4.5

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
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	H		L, M		
25501/2	H		L, M		

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
1992 Cases					
25641	L, M, H				
25644	L, M, H				
1993 Cases					
26019		L, M, H			
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				

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 4.6 (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						
24670#	3.3 (35.8)	0.7 (7.9)	-1.2 (-13.5)	2.6 (28.1)	2.5 (27.5)	5.6, 4.9
1992 Cases						
24870	3.2 (19.2)	3.8 (22.9)	-5.3 (-32.2)	11.2 (67.9)	-0.2 (-1.1)	1.2
24970	9.4 (36.5)	-2.5 (-9.6)	4.0 (15.5)	0.4 (1.6)	7.0 (27.4)	6.4
25300	17.9 (74.9)	-2.1 (-8.9)	2.0 (8.3)	-0.2 (-0.7)	3.5 (14.6)	4.0
25501/2	13.8 (21.0)	10.9 (16.7)	5.2 (7.9)	N.A.	24.1 (36.7)	13.6S/ 18.7D
25641	14.1 (74.9)	7.1 (37.5)	-11.7 (-62.1)	-1.5 (-7.9)	8.4 (44.7)	12.6
25644	14.9 (78.7)	5.5 (28.9)	-9.9 (-52.6)	6.2 (32.6)	0.2 (0.9)	0.2

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
1993 Cases						
26019#	1.2 (3.5)	20.0 (60.3)	7.4 (22.4)	-11.4 (-34.4)	6.9 (20.9)	20.1
26110	36.4 (83.9)	5.9 (13.5)	-10.3 (-23.8)	1.3 (3.0)	6.9 (15.8)	17.1
26290	-89.1 (-329)	9.8 (36.2)	-84.1 (-311)	185.7 (686.0)	52.8 (195.1)	4.1
26621	0.8 (11.1)	-2.0 (-25.9)	0.01 (0.2)	N.A.	6.1 (79.1)	4.9
26622	14.5 (66.6)	0.03 (0.2)	5.6 (25.9)	N.A.	0.6 (2.7)	0.7
26623#	6.8 (59.0)	2.6 (22.7)	-1.7 (-14.5)	N.A.	2.5 (21.7)	9.6
26624	11.6 (71.8)	0.05 (0.3)	2.2 (13.9)	N.A.	1.2 (7.4)	2.6
26641(N)	8.6 (64.8)	-0.2 (-1.7)	0.4 (2.9)	0.1 (1.1)	3.1 (23.1)	5.0
26642(N)	7.7 (78.2)	-0.08 (-0.8)	0.3 (2.6)	-0.2 (-2.2)	1.9 (18.8)	4.2
26643(N)#	3.7 (39.4)	1.0 (10.3)	0.6 (6.1)	-0.7 (-7.6)	4.1 (43.8)	7.3
26644(N)	25.8 (65.2)	-0.07 (-0.2)	-2.4 (-6.0)	0.7 (1.7)	7.9 (20.0)	12.1

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
1993 Cases						
26880	11.7 (24.1)	17.1 (35.3)	-0.7 (-1.4)	12.2 (25.1)	0.9 (1.9)	0.7
27049	0.9 (7.0)	5.5 (42.1)	-0.5 (-4.0)	3.3 (24.8)	4.4 (33.5)	3.7
1994 Cases						
27220	17.3 (35.7)	12.8 (26.3)	-0.8 (-1.7)	7.7 (16.0)	5.3 (10.9)	6.6
27240#	11.3 (71.5)	-48.5 (-308)	-4.5 (-28.6)	28.7 (182.1)	21.4 (135.8)	33.6
27440	23.7 (111.7)	-3.3 (-15.4)	0.2 (1.2)	-2.0 (-9.5)	0.3 (1.2)	0.6
27611	5.6 (56.4)	1.2 (12.0)	-4.7 (-46.9)	0.8 (7.6)	5.4 (54.3)	4.2
27612	5.5 (54.7)	0.6 (6.4)	1.3 (13.5)	0.4 (4.4)	1.8 (17.9)	1.6
28090	4.6 (60.5)	0.3 (3.3)	1.5 (19.0)	1.3 (17.1)	0.2 (3.1)	0.7
28160	-12.8 (110.4)	-33.9 (291.6)	17.1 (-147)	12.2 (-105)	-0.5 (4.0)	0.1

TABLE 4.6 (Concluded)

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
1994 Cases						
28251#	-29.9 (138.0)	10.8 (-49.7)	-12.0 (55.2)	4.3 (-19.9)	17.0 (-78.3)	35.1
28370	-16.1 (138.5)	-18.8 (161.7)	17.3 (-149)	1.1 (-9.2)	4.9 (-42.1)	4.2
Median	5.6	1.1	-0.2	0.7	3.8	5.0, 4.6

NOTES:

For details about the countries and products involved in each case, see Table 2.3.
N.A. = not available.
 # indicates case where unfair practice had greater adverse effect on domestic industry than other causal factors examined.
*** 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 4.7

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
1989 Cases						
21501#	12.6 (111.0)	-0.5 (-4.3)	-4.9 (-43.3)	N.A.	4.2 (37.3)	18.9, 13.9
21502#	3.7 (55.8)	1.0 (15.6)	-5.9 (-89.3)	N.A.	7.9 (120.5)	41.3
21699	-13.1 (91.8)	-10.3 (72.3)	11.2 (-78.7)	-1.1 (7.6)	2.4 (-16.7)	3.7
21830	-11.7 (-640)	8.1 (442.3)	10.1 (554.4)	-3.7 (-204)	1.3 (71.8)	2.3
21930#	9.7 (65.1)	9.3 62.0	-3.6 (-23.8)	N.A.	-2.4 (-15.8)	10.7
22130	-4.3 (-*)	10.0 (*)	-3.0 (-742)	N.A.	-2.9 (-717)	4.9, 1.4
22160	85.0 (61.5)	22.2 (16.1)	40.3 (29.2)	-24.4 (-17.7)	-8.7 (-6.3)	3.6, 1.2
1990 Cases						
22530	-0.2 (-2.5)	8.9 (98.6)	-1.0 (-10.7)	4.6 (50.7)	-1.5 (-16.4)	2.1, 0.7

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						
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)	0.4 (0.4)	27.6 (31.9)	66.7
24109#	3.3 (332.2)	-3.9 (-385)	0.5 (52.8)	-0.3 (-30.7)	1.5 (150.7)	5.8
24611	4.0 (16.6)	41.6 (173.2)	-5.9 (-24.5)	-9.5 (-39.4)	-1.7 (-6.9)	1.1
24670#	3.0 (-420)	0.7 (-92.8)	-9.3 (*)	2.3 (-330)	2.3 (-322)	5.1, 4.5
1992 Cases						
24870	2.9 (31.8)	3.4 (37.8)	-9.7 (-107)	10.2 (111.8)	-0.2 (-1.8)	1.0

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
1992 Cases						
24970	8.5 (-182)	-2.2 (47.8)	-19.8 (422.6)	0.4 (-8.2)	6.4 (-137)	5.8
25300	4.1 (37.2)	-0.5 (-4.8)	5.8 (53.3)	-0.04 (-0.3)	0.8 (7.7)	1.0
25501/2	2.2 (9.4)	1.7 (7.5)	14.2 (61.2)	N.A.	3.7 (15.8)	2.1 S/ 2.9 D
25641	12.8 (*)	6.4 (744.0)	-23.1 (-*)	-1.4 (-157)	7.6 (884.8)	11.4
25644	13.4 (*)	5.0 (574.0)	-21.6 (-*)	5.6 (645.6)	0.2 (17.8)	0.2
1993 Cases						
26019#	1.1 (56.0)	18.0 (948.4)	-16.2 (-851)	-10.4 (-548)	6.3 (330.5)	18.1
26110	32.6 (140.6)	5.3 (22.9)	-19.6 (-84.5)	1.2 (5.1)	6.2 (26.8)	15.5
26290	-86.7 (158.7)	8.9 (-16.3)	-93.1 (170.5)	159.7 (-292)	47.0 (-86.1)	3.7
26621	0.8 (-36.0)	-1.8 (84.6)	-8.5 (396.7)	N.A.	5.5 (-257)	4.4

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
1993 Cases						
26622	13.1 (656.6)	0.03 (1.5)	-10.4 (-520)	N.A.	0.5 (27.0)	0.7
26623#	6.1 (522.8)	2.4 (201.9)	-9.7 (-829)	N.A.	2.3 (193.2)	8.7
26624	10.5 (334.9)	0.05 (1.4)	-8.2 (-261)	N.A.	1.1 (34.5)	2.3
26641(N)	7.8 (262.2)	-0.2 (-7.0)	-7.8 (-260)	0.1 (4.5)	2.8 (93.8)	4.5
26642(N)	7.0 (*)	-0.07 (-14.3)	-7.5 (-*)	-0.2 (-40.8)	1.7 (351.4)	3.8
26643(N)#	3.3 (-138)	0.9 (-35.8)	-9.6 (394.1)	-0.6 (26.5)	3.7 (-153)	6.6
26644(N)	23.2 (160.1)	-0.06 (-0.4)	-17.3 (-119)	0.6 (4.3)	7.2 (49.5)	11.0
26880	10.6 (33.4)	15.5 (48.7)	-8.6 (-27.2)	11.0 (34.7)	0.8 (2.6)	0.6
27049	0.8 (18.1)	5.0 (108.1)	-6.9 (-149)	3.0 (63.6)	4.0 (86.0)	3.4

TABLE 4.7 (Concluded)

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
1994 Cases						
27220	15.6 (49.2)	11.5 (36.3)	-8.8 (-27.6)	7.0 (22.1)	4.8 (15.2)	6.0
27240#	10.2 (109.7)	-45.3 (-488)	-8.2 (-88.7)	25.8 (277.3)	19.3 (207.5)	30.2
27440	21.3 (-*)	-3.0 (274.9)	-16.8 (*)	-1.8 (169.5)	0.2 (-21.4)	0.6
27611	5.1 (-143)	1.1 (-30.5)	-15.4 (427.9)	0.7 (-19.2)	4.9 (-137)	3.8
27612	5.0 (-138)	0.6 (-16.3)	-10.5 (292.7)	0.4 (-11.1)	1.6 (-45.3)	1.5
28090	4.2 (-292)	0.2 (-16.1)	-6.6 (459.7)	1.2 (-82.5)	0.2 (-15.1)	0.6
28160	-11.7 (-107)	-31.3 (-285)	43.3 (393.9)	11.1 (100.6)	-0.4 (-3.8)	0.1
28251#	-23.4 (80.2)	8.0 (-27.4)	-22.7 (77.7)	3.2 (-11.0)	12.5 (-42.8)	25.3
28370	-14.7 (-134)	-17.2 (-157)	43.6 (396.4)	1.0 (8.8)	4.4 (40.3)	3.8
Median	4.2	1.0	-8.2	0.5	2.8	3.9, 3.8

NOTES:
For details about the countries and products involved in each case, see Table 2.3.
N.A. = not available.
 # indicates case where unfair practice had greater adverse effect on domestic industry than other causal factors examined.
*** 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) bur rather a cumulation of cases for the product.

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 (Percent)	Dumping (Percent)	Value (Percent)	Quantity (Percent)			
1	21501	JAN89	CONSOLES IN DRO SYSTEMS	PVQ	N/R	51.03	.	.	NONE	N/R	NONE
2	21502	JAN89	TRANSDUCERS IN DRO SYS	PVQ	N/R	51.03	.	.	NONE	N/R	NONE
3	21520	JAN89	APPLIANCE PLUGS	INSUFF	N/A	N/A	.	.	PART	PART	PART
4	21630	MAR89	ALL TERRAIN VEHICLES	INSUFF	N/R	24.59	.	.	PART	N/R	PART
5	21699	MAR89	LT-WALL RECTANG PIPE	VQ	N/R	42.39	7.10	10.20	PART	N/R	PART
6	21700	MAR89	MICRODISKS AND MEDIA	INSUFF	N/R	42.95	.	.	NONE	N/R	NONE
7	21720	MAR89	CALCINED BAUXITE PROPANT	INSUFF	N/R	75.00	.	.	ALL	N/R	ALL
8	21770	MAY89	ELECTROLYTIC MANGANESE	INSUFF	N/R	N/A	.	.	NONE	N/R	NONE
9	21830	MAY89	SEWN CLOTH HEADWEAR	VQ	N/R	21.37	14.00	29.30	NONE	N/R	ALL
10	21851	MAY89	BALL BEARINGS	V	1.06	59.26	23.80	.	PART	PART	PART
11	21852	MAY89	SPHERICAL ROLLER BEARING	V	*	49.47	12.20	.	PART	PART	PART
12	21853	MAY89	CYLINDRICAL ROLLER BEAR	V	N/R	N/A	10.30	.	PART	N/R	PART
13	21854	MAY89	NEEDLE ROLLER BEARINGS	PMSV	N/R	N/A	8.60	.	PART	N/R	PART
14	21855	MAY89	SPHERICAL PLAIN BEARINGS	INSUFF	N/R	N/A	.	.	PART	N/R	NONE
15	21856	MAY89	SLEWING RINGS	INSUFF	N/R	N/A	.	.	N/A	N/R	N/A
16	21930	MAY89	STEEL WHEELS	PVQ	17.29	N/R	.	.	N/R	NONE	N/R
17	21940	MAY89	INDUSTRIAL BELTS	CMSV	0.22	64.00	11.30	.	PART	PART	NONE
18	22110	AUG89	CEPHALEXIN	INSUFF	N/R	7.50	.	.	NONE	N/R	NONE
19	22130	AUG89	12V MOTORCYCLE BATTERIES	PVQ	N/R	5.65	33.50	37.10	PART	N/R	NONE
20	22160	AUG89	MARTIAL ARTS UNIFORMS	VQ	N/R	8.50	16.40	19.60	ALL	N/R	NONE
21	22171	SEP89	NEW STEEL RAILS	CMSV	N/R	38.79	5.00	.	ALL	N/R	ALL
22	22172	SEP89	NEW STEEL RAILS	CMSV	113.56	38.79	5.00	.	ALL	PART	ALL
23	22180	SEP89	FRESH CHILLED FROZ PORK	Q	2.90	N/R	.	2.90	N/R	NONE	N/R
24	22379	NOV89	SMALL BUSINESS TELEPHONE	V	N/R	99.59	34.00	.	PART	N/R	PART
25	22421	DEC89	ALUMINUM SULFATE	INSUFF	N/R	259.17	.	.	ALL	N/R	NONE
26	22422	DEC89	ALUMINUM SULFATE	INSUFF	38.40	N/R	.	.	N/R	ALL	N/R
27	22470	DEC89	DRAFTING MACHINES	INSUFF	N/R	90.89	.	.	ALL	N/R	NONE
28	22530	JAN90	RESIDENTIAL DOOR LOCKS	VQ	N/R	8.24	7.90	14.10	NONE	N/R	NONE
29	22570	FEB90	MECH TRANSFER PRESSES	CMSV	N/R	14.51	70.80	.	NONE	N/R	ALL
30	22770	MAY90	STEEL PAILS	PV	N/R	75.57	.	.	NONE	N/R	NONE
31	22959	JUN90	NITROCELLULOSE	INSUFF	N/R	N/R	.	.	PART	N/R	PART
32	23050	AUG90	PORTLAND CEMENT	Q	N/R	60.41	.	16.00	PART	N/R	NONE
33	23120	SEP90	MMF SWEATERS	Q	N/R	N/R	.	52.70	PART	N/R	PART
34	23280	NOV90	LASER INSTRUMENTS	INSUFF	N/R	129.71	.	.	ALL	N/R	NONE
35	23550	FEB91	BENZYL PARABEN	CMSVQ	N/R	126.00	61.00	62.00	ALL	N/R	NONE
36	23571	FEB91	STRIKING TOOLS	INSUFF	N/R	45.42	.	.	ALL	N/R	ALL
37	23572	FEB91	BAR TOOLS	INSUFF	N/R	31.76	.	.	ALL	N/R	ALL
38	23573	FEB91	DIGGING TOOLS	INSUFF	N/R	50.81	.	.	ALL	N/R	ALL

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 (Percent)	Dumping (Percent)	Value (Percent)	Quantity (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	N/R	62.50	60.20	N/R	NONE	N/R
42	23712	APR91	FRESH ATLANTIC SALMON	VQ	N/R	23.80	62.50	60.20	PART	N/R	PART
43	23760	APR91	PORTLAND CEMENT	VQ	N/R	62.21	17.17	25.74	PART	N/R	NONE
44	23830	MAY91	POLYESTER FILM	VQ	N/R	5.84	15.80	14.10	NONE	N/R	PART
45	23840	MAY91	SHEET PILING	INSUFF	N/R	2.91	.	.	NONE	N/R	NONE
46	23859	JUN91	SILICON METAL	VQ	N/R	107.98	23.40	28.00	PART	N/R	PART
47	23870	JUN91	SPARKLERS	VQ	N/R	75.88	48.10	76.20	NONE	N/R	ALL
48	24109	AUG91	STEEL WIRE ROPE	VQ	2.44	56.73	7.90	9.90	PART	ALL	PART
49	24111	AUG91	OFFICE TYPING SYSTEMS	INSUFF	N/R	58.70	.	.	ALL	N/R	NONE
50	24112	AUG91	PERSONAL WORD PROCESSORS	INSUFF	N/R	58.70	.	.	ALL	N/R	NONE
51	24120	AUG91	GENE AMPLIFICATION CYCLE	INSUFF	N/R	13.43	.	.	NONE	N/R	NONE
52	24130	AUG91	FLAT PANEL DISPLAYS	INSUFF	N/R	N/A	.	.	NONE	N/R	PART
53	24270	SEP91	LUG NUTS	INSUFF	N/R	6.25	.	.	NONE	N/R	PART
54	24470	NOV91	TUNGSTEN ORE CONCENTRATE	INSUFF	N/R	151.00	.	.	ALL	N/R	ALL
55	24611	DEC91	CEILING FANS	VQ	N/R	2.05	23.70	33.80	NONE	N/R	ALL
56	24612	DEC91	OSCILLATING FANS	INSUFF	N/R	0.99	.	.	NONE	N/R	ALL
57	24670	DEC91	COATED GROUNDWOOD PAPER	PVQ	N/R	32.96	8.10	7.70	PART	N/R	NONE
58	24870	MAR92	SHOP TOWELS	VQ	N/R	4.60	5.80	7.20	NONE	N/R	ALL
59	24970	APR92	REF ANTIMONY TRIOXIDE	VQ	N/R	33.10	10.10	12.30	ALL	N/R	ALL
60	24980	APR92	NONCONTACT AO LENSES	INSUFF	N/R	158.00	.	.	ALL	N/R	NONE
61	25020	APR92	NEPHELINE SYENITE	INSUFF	N/R	9.36	.	.	NONE	N/R	NONE
62	25100	MAY92	KIWIFRUIT	INSUFF	N/R	98.60	.	.	ALL	N/R	NONE
63	25250	JUN92	RAYON YARN	INSUFF	N/R	24.58	.	.	NONE	N/R	NONE
64	25280	JUN92	BUTT-WELD PIPE FITTINGS	PV	N/R	133.46	29.97	.	ALL	N/R	PART
65	25290	JUL92	MINIVANS	INSUFF	N/R	9.72	.	.	NONE	N/R	ALL
66	25300	JUL92	SOFTWOOD LUMBER	VQ	6.51	N/R	28.30	27.50	N/R	NONE	N/R
67	25429	AUG92	SULFANIC ACID	INSUFF	N/R	N/A	40.13	46.23	ALL	ALL	PART
68	25501	AUG92	MAGNESIUM	PVQ	21.61	N/R	.	.	N/R	NONE	N/R
69	25502	AUG92	MAGNESIUM	PVQ	N/R	31.33	.	.	PART	N/R	NONE
70	25590	SEP92	RUBBER THREAD	INSUFF	N/R	15.16	.	.	NONE	N/R	PART
71	25641	OCT92	STANDARD PIPE	VQ	N/R	21.65	22.80	25.10	PART	N/R	PART
72	25642	OCT92	MECHANICAL TUBING	INSUFF	N/R	N/A	.	.	PART	N/R	PART
73	25643	OCT92	FINISHED CONDUIT	NOINJ	N/R	N/A	0.00	0.00	PART	N/R	PART
74	25644	OCT92	STANDARD PIPE	VQ	N/R	14.90	0.50	0.70	NONE	N/R	ALL
75	25645	OCT92	MECHANICAL TUBING	INSUFF	N/R	14.90	.	.	NONE	N/R	ALL
76	25646	OCT92	FINISHED CONDUIT	NOINJ	N/R	14.90	0.00	0.00	NONE	N/R	ALL

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 (Percent)	Dumping (Percent)	Value (Percent)	Quantity (Percent)			
77	25850	DEC92	STAINLESS STEEL PIPE	INSUFF	N/R	15.28	.	.	NONE	N/R	PART
78	26019	FEB93	STAINLESS STEEL PIPE FIT	VQ	N/R	47.26	19.80	26.50	PART	N/R	PART
79	26029	FEB93	SULFUR DYES	INSUFF	N/R	N/A	.	.	PART	N/R	PART
80	26030	FEB93	SULFANIC ACID	INSUFF	N/A	N/A	10.00	.	ALL	ALL	PART
81	26069	MAR93	FERROSILICON	INSUFF	N/A	N/A	.	.	PART	NONE	PART
82	26110	MAR93	LEAD/BISMUTH BAR AND ROD	VQ	14.47	58.62	19.40	20.50	PART	NONE	PART
83	26130	MAR93	STEEL WIRE ROPE	CMSV	N/R	11.14	10.30	.	PART	N/R	NONE
84	26170	MAR93	STEEL RAILS	INSUFF	N/R	69.28	.	.	NONE	N/R	NONE
85	26290	MAY93	ALL DRAMS	VQ	N/R	3.89	19.70	24.80	NONE	N/R	NONE
86	26300	APR93	DRY FILM PHOTORESIST	INSUFF	N/R	52.37	.	.	ALL	N/R	NONE
87	26510	JUN93	HELICAL SPRING WASHERS	INSUFF	N/R	31.93	.	.	ALL	N/R	ALL
88	26581	JUL93	ELECTRIC CUTTING TOOLS	INSUFF	N/R	54.43	.	.	NONE	N/R	NONE
89	26582	JUL93	SAND/GRIND TOOLS	INSUFF	N/R	46.75	.	.	NONE	N/R	NONE
90	26621	JUL93	SEMIFINISHED STEELS	PVQ	N/R	19.67	.	.	ALL	N/R	NONE
91	26622	JUL93	SPECIAL QUALITY STEELS	PVQ	N/R	19.67	.	.	ALL	N/R	NONE
92	26623	JUL93	FREE-MACHINING BARS	PVQ	N/R	27.00	.	.	ALL	N/R	NONE
93	26624	JUL93	SPECIAL QUALITY BARS	PVQ	N/R	27.00	.	.	ALL	N/R	NONE
94	26641N	AUG93	HOT-ROLLED FLAT STEEL	VQ	5.47	34.40	7.00	6.10	PART	PART	PART
95	26642N	AUG93	COLD-ROLLED FLAT STEEL	VQ	7.36	34.96	8.10	6.50	PART	PART	PART
96	26643N	AUG93	CORROSION-RESISTANT STEEL	VQ	3.96	32.31	17.00	16.10	PART	PART	NONE
97	26644N	AUG93	STEEL PLATE	VQ	9.63	47.18	13.00	14.40	PART	PART	PART
98	26691	AUG93	URANIUM	NOINJ	N/R	129.29	0.00	0.00	ALL	N/R	ALL
99	26692	AUG93	URANIUM EXCEPT ENRICHED	INSUFF	N/R	129.29	.	.	ALL	N/R	ALL
100	26693	AUG93	HIGHLY ENRICHED URANIUM	INSUFF	N/R	129.29	.	.	ALL	N/R	ALL
101	26711	AUG93	IRON WATERWORKS FITTINGS	CMSVQ	N/R	127.38	4.40	6.60	ALL	N/R	ALL
102	26712	AUG93	IRON GLANDS	CMSVQ	N/R	127.38	4.10	4.90	ALL	N/R	ALL
103	26713	AUG93	ACCESSORY PACKS	NOINJ	N/R	127.38	0.00	0.00	ALL	N/R	ALL
104	26790	SEP93	PADS FOR WOODWINDS	INSUFF	N/R	1.82	.	.	NONE	N/R	NONE
105	26810	SEP93	PORTABLE ELEC TYPEWRITERS	INSUFF	N/R	15.51	.	.	NONE	N/R	NONE
106	26840	OCT93	HELICAL SPRING WASHERS	INSUFF	N/R	128.64	.	.	ALL	N/R	ALL
107	26880	OCT93	FERROSILICON	VQ	N/R	90.50	0.80	1.30	ALL	N/R	NONE
108	27049	NOV93	STAINLESS STEEL WIRE ROD	VQ	N/R	28.99	12.60	14.30	PART	N/R	PART
109	27220	JAN94	FERROSILICON	VQ	N/R	35.95	13.70	15.80	PART	N/R	PART
110	27240	FEB94	STAINLESS STEEL FLANGES	PVQ	N/R	126.05	23.90	37.10	PART	N/R	PART
111	27400	FEB94	DEFROST TIMERS	INSUFF	N/R	83.67	.	.	ALL	N/R	NONE
112	27440	MAR94	STAINLESS STEEL PIPE	VQ	N/R	9.13	2.50	3.40	NONE	N/R	PART
113	27611	MAR94	HOT-ROLLED WIRE ROD	VQ	N/R	13.48	11.92	10.99	PART	N/R	PART
114	27612	MAR94	HOT-ROLLED WIRE ROD	VQ	N/R	17.95	13.20	10.99	PART	N/R	PART

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 (Percent)	Dumping (Percent)	Value (Percent)	Quantity (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	CALCIUM ALUMINATE FLUX	INSUFF	N/R	37.93	.	.	NONE	N/R	NONE
121	27830	JUN94	PPD-T ARAMID FIBER	INSUFF	N/R	55.84	.	.	NONE	N/R	PART
122	27930	JUL94	SEBACIC ACID	INSUFF	N/R	243.40	.	.	ALL	N/R	ALL
123	28000	AUG94	SILICON ELECTRIC STEEL	INSUFF	N/R	60.79	.	.	ALL	N/R	ALL
124	28090	SEP94	PHTHALIC ANHYDRIDE	VQ	N/R	52.00	1.60	1.80	ALL	N/R	ALL
125	28160	OCT94	PENCILS	VQ	N/R	115.52	0.20	0.40	ALL	N/R	ALL
126	28251	NOV94	FRESH GARLIC	VQ	N/R	376.67	22.10	35.20	ALL	N/R	ALL
127	28252	NOV94	DEHY GARLIC	INSUFF	N/R	376.67	.	.	ALL	N/R	ALL
128	28253	NOV94	SEED GARLIC	INSUFF	N/R	376.67	.	.	ALL	N/R	ALL
129	28290	NOV94	PAPER CLIPS	INSUFF	N/R	126.94	.	.	ALL	N/R	ALL
130	28360	DEC94	SILICOMANGANESE	INSUFF	N/R	89.97	.	.	PART	N/R	PART
131	28370	DEC94	PENCILS	VQ	N/R	44.66	10.80	22.10	ALL	N/R	ALL
132	28420	DEC94	SACCHARIN	INSUFF	N/R	391.42	.	.	ALL	N/R	ALL

"." = not available (e.g., data confidential); N/A = not available (e.g., cannot calculate); N/R = not relevant.
* = less than 0.01.
Under data type:
Q = quantity; V = value; VQ = value and quantity; CMSQ = complete market share quantity; CMSV = complete market share value; CMSVQ = complete market share value and quantity; PQ = partial quantity; PV = partial value; PVQ = partial value and quantity; PMSQ = partial market share quantity; PMSV = partial market share value; INSUFF = insufficient; NOINJ = no injury.

TABLE A.2

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									
21501/Consols for digital read outs (DROs)	-0.7	-0.85	-1	1.5	3	5	5	10	20
21502/Transducers for DROs	-0.7	-0.85	-1	1.5	3	5	5	10	20
21699/Llight-walled rectangular steel pipe	-0.5	-0.85	-1.2	1.5	3	4.5	5	10	20
21830/Headwear	-0.5	-1.0	-1.5	1.25	2	3	5	10	20
21851/Ball bearings	-0.05	-0.25	-0.5	2	3	4	5	10	20
21852/Spherical roller bearings	-0.05	-0.25	-0.5	2	3	4	5	10	20
21853/Cylindrical roller bearings	-0.05	-0.25	-0.5	2	3	4	5	10	20
21854/Needle roller bearings	-0.05	-0.25	-0.5	2	3	4	5	10	20
21930/Steel wheels	-0.25	-0.5	-1.0	3	4	5	5	10	20
21940/Industrial belts	-0.25	-0.5	-1.0	1.25	2.5	4	5	10	20
22130/Motorcycle batteries	-0.01	-0.02	-0.04	2	3	4	5	10	20
22160/Martial arts uniforms	-0.5	-0.75	-1.0	3	4	5	5	10	20
22171/New steel rails	-1	-1.25	-1.5	3	4	5	5	10	20

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									
22172/New steel rails	-1	-1.25	-1.5	3	4	5	5	10	20
22180/Pork	-0.5	-0.75	-1	3	6	12	0.2	0.4	0.6
22379/Telephone systems	-1	-1.25	-1.5	3	4	5	5	10	20
1990 cases									
22530/Residential door locks	-0.1	-0.2	-0.3	3	4	5	5	10	20
22570/Mechanical presses	-0.6	-0.8	-1	2	3	4	5	10	20
22770/Steel pails	-1	-1.5	-2	3	4	5	5	10	20
23050/Cement and clinker	-0.2	-0.35	-0.5	5	7.5	10	5	10	20
1991 cases									
23550/Benzyl paraben	-1	-1.5	-2	3	4	5	5	10	20
23711/Salmon	-1	-1.75	-2.5	3	4.5	6	0.16	0.32	0.64
23712/Salmon	-1	-1.75	-2.5	3	4.5	6	0.16	0.32	0.64
23760/Cement and clinker	-0.2	-0.35	-0.5	5	7.5	9	5	10	20

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
1991 cases									
23830/Polyester ("PET") film	-0.6	-0.9	-1.2	3	6.5	10	5	10	20
23859/Silicon metal	-0.25	-0.375	-0.5	1.5	2.5	4	0.1	0.2	0.4
23870/Sparklers	-0.5	-1.25	-2	5	6.5	8	5	10	20
24109/Steelwire rope	-0.3	-0.5	-0.7	2	3	4	5	10	20
24611/Ceiling fans	-0.5	-1.25	-2	3	4	5	5	10	20
24670/Groundwood paper	-0.5	-0.65	-0.8	3	4	5	5	10	20
1992 cases									
24870/Shop towels	-0.4	-0.7	-1	4	5.5	7	5	10	20
24970/Antimony	-0.2	-0.35	-0.5	2	3	4	5	10	20
25280/Steel pipe fittings	-0.3	-0.5	-0.7	1.25	2	3	5	10	20
25300/Softwood lumber	-0.3	-0.6	-0.9	3	4	5	0.16	0.32	0.64
25501/Magnesium	-0.25	-0.625	-1	4	5.5	7	0.1	0.2	0.4
25502/Magnesium	-0.25	-0.625	-1	4	5.5	7	0.1	0.2	0.4
25641 & 25644/Standard pipe	-0.5	-0.625	-0.75	3	4	5	5	10	20

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
1993 cases									
26019/SS butt-weld pipe fittings	-0.25	-0.5	-.075	1.1	2	3	5	10	20
26110/Lead-bismuth bar and rod	-1	-1.25	-1.5	3	4	5	5	10	20
26130/Steel wire rope	-0.3	-0.5	-0.7	2	3	4	5	10	20
26290/DRAMs	-0.75	-1.0	-1.5	3	4	5	5	10	20
26621/Free-machining SF steels	-0.5	-0.625	-0.75	3	4	5	5	10	20
26622/Special quality SF steels	-0.5	-0.625	-0.75	1.1	1.25	1.5	5	10	20
26623/Free-machining HR bars	-0.5	-0.625	-0.75	3	4	5	5	10	20
26624/Special quality HR bars	-0.5	-0.625	-0.75	3	4	5	5	10	20
26641(N)/HR flat steel	-0.6	-0.7	-0.8	3.1	3.7	4.3	5	10	20
26642(N)/CR flat steel	-0.7	-0.8	-0.9	2.2	2.65	3.1	5	10	20
26643(N)/Corrosion-resistant flat steel	-0.5	-0.65	-0.8	1.8	2.2	2.6	5	10	20
26644(N)/Steel-pipe	-0.5	-0.6	-0.7	3.2	3.8	4.4	5	10	20
26711/Iron waterworks fittings	-0.5	-0.625	-0.75	2	3	4	5	10	20
26712/Iron glands for waterworks fittings	-0.5	-0.625	-0.75	2	3	4	5	10	20
26880/Ferrosilicon	-0.2	-0.35	-0.5	1.1	2	3	5	10	20
27049/SS wire rod	-0.5	-0.75	-1.0	1.1	2	3	5	10	20

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:

L, M, and H indicate low, mid, and high elasticity estimates respectively. The elasticity estimates shown were used for both full pass through and, where relevant, for corresponding partial pass-through dumping margin cases.
Data: for (1) and (2), various memoranda by USITC staff ("Elasticity Memos"); for (3) Morkre and Kelly (1994), Appendix D.
SS = stainless steel; SF = semifinished; HR = hot-rolled; CR = cold-rolled.
N.A. = not available.