

BALL BEARINGS FROM FRANCE, GERMANY, JAPAN, ITALY, ROMANIA, SINGAPORE, SWEDEN, AND THE UNITED KINGDOM

Ball bearings are the largest category antifriction bearing products. These products are machine components that “permit free motion between moving and fixed parts by holding, separating, or guiding the moving parts to minimize friction and wear.”²²¹ Other antifriction products include tapered roller bearings, cylindrical roller bearings, and spherical roller bearings. Bearings are frequently distinguished by their rolling element. Ball bearings consist of an inner and outer race and balls that are fitted into a cage. For roller bearings, the rolling element is not a ball, but a roller.



Modern bearing production is capital intensive. High quality alloy steel is used and machined into balls and races, and cold-rolled steel is used to produce the cage. The balls are made from alloy wire while the races are made from alloy steel tubes or bars. After machining, the balls and races are heat treated and finished by a series of grinding and honing operations. The balls, cage, and races are then assembled into the final product.²²² Balls and cages are often produced by firms that specialize in component production and then sold to the major bearing producers.

At the time of the 1999 sunset investigation of the original orders, ball bearing production facilities were located in 19 states, with production concentrated in the Northeast (primarily in Connecticut, New York, and Pennsylvania); Southeast (primarily in Georgia, South Carolina, and Tennessee); and in the Midwest (primarily in Illinois, Indiana, and Ohio).²²³ Industry employment among the firms reporting to the Commission

221 Certain Bearings from China, France, Germany, Hungary, Italy, Japan, Romania, Singapore, Sweden, and the United Kingdom, USITC Pub. 3309, Invs. Nos. AA1921-143, 731-TA-341, 731-TA-343-345, 731-TA-391-397, and 731-TA-399 (Review) (June 2000) at Overview-7.

222 Id. at Overview 7-9 and I-25 to I-26.

223 Id. at BB-I-30 to BB-I-35

totaled approximately 12,000 production workers and total sales exceeded \$2.2 billion.²²⁴

Bearing production, including the production of ball bearings, was dominated by large producers in major industrial countries (e.g., Japan, Germany, France, and the United States). Many of these producers have facilities in more than one country. In recent years, China has become a major producer of ball bearings as well.

Original investigations and determinations

There have been many investigations of unfair trade of bearings. The first TRB order went into effect in 1976 on imports from Japan. A second TRB petition was filed in 1986. In March 1988, a petition was filed alleging subsidized imports from Thailand and Singapore, as well as dumped ball bearings from France, Germany, Japan, Italy, Romania, Singapore, Sweden, and the United Kingdom.²²⁵ The Department of Commerce found that ball bearings were being sold at less than fair value. The ranges of dumping margins found by the Department for the eight countries ranged from 2.55 percent to 106.61 percent.²²⁶ The Commission's period of investigation covered 1985 to 1987. The Commission found the following indicators of material injury due to the subject imports.

- The volume of imports was significant. Because ball bearings come in so many different sizes and price points, the Commission assessed import volume on the basis of values, not quantities. On this basis, the subject market share grew from 20.2 percent in 1985 to 23.8 percent in 1987, with nearly all of the increase in market share coming at the expense of the U.S. industry.²²⁷
- The subject imports undersold the domestically produced ball bearings and prevented domestic producers from increasing prices to deal with higher costs.²²⁸
- The significant volume and price effects of the subject imports led to a consistent decline in the profitability of the domestic industry.²²⁹ Data indicate that employment levels and domestic capacity also shrunk during the 1985-1987 timeframe.²³⁰

224 Id. at BB-III-2 and BB-III-4.

225 Id. at Overview-4. This petition also alleged dumping of several other antifriction bearing products.

226 Id. at BB-I-5 to BB-I-8.

227 Id. at 43 and BB-I-2.

228 Id. at 44.

229 Id. at 45.

230 Id. at BB-I-3.

Some of the data relevant to the Commission's affirmative injury determination are shown in the table below.

Table 33. Ball Bearings from France, Germany, Japan, Italy, Romania, Singapore, Sweden, and the United Kingdom:
Selected Data Collected by the USITC

Item	1985	1986	1987	1998	1999
U.S. shipment (\$mil.)	1,302	1,187	1,169	2,260	2,273
U.S. market share (percent, by value)	77.3	74.5	73.5	70.5	69.9
Subject imports (\$mil.)	332	351	361	508	506
Production workers (number)	12,937	12,029	11,681	12,278	12,284
Operating income (\$mil)	126	95	89	170	148
Note: subject import value excludes imports from Thailand.					
Sources: USITC Pub. 3309 (Vol. II) at BB-I-2 to BBI-3.					

Estimated revenue impact of unfair trade

The table below shows estimated revenue losses due to dumping based on data from the original investigation.²³¹ The dumping margins are weighted-average margins calculated by multiplying the simple averages of the individual company rates for each country and the respective ratio of each country's imports to total unfairly traded imports. The annual weighted-average margin exceeded 50 percent each year. We have adjusted the elasticities suggested in the sunset review because the market structure, export share of shipments, and other factors suggest lower domestic supply elasticities than estimated by Commission Staff during the review. Based on these elasticities, the annual revenue losses due to dumping were approximately \$280 million per year. In other words, dumping appears to have reduced domestic revenues by approximately 19 percent each year from levels that would have been achieved if no dumping had occurred.

Table 34. Ball Bearings from France, Germany, Japan, Italy, Romania, Singapore, Sweden, and the United Kingdom:
Estimated Lost Revenue due to Dumping

Item	1985	1986	1987	Total
Estimated dumping margin (percent)	53.18	54.67	54.70	N/A
Lost revenue due to dumping (\$mil.)	275	284	288	847
Sources: USITC Pub. 3309 (Vol. II) at BB-I-2 to BBI-3 and author's calculations.				

231 Due to the lack of quantity data, the price for each year was assumed to be 1 and the quantity was assumed to equal the value of U.S. shipments, unfair imports, and fair imports, respectively. These assumptions do not alter the model's revenue calculations from the case in which actual quantity data were used.

The indirect effects and financial costs of dumping are shown in the table below. The indirect effects are caused by the fact that dumping resulted in lost domestic economic activity that would have occurred but for the market distortion caused by dumping. The Department of Commerce estimates detailed industry total requirement tables for various U.S. industries. These tables are used to calculate multipliers that enable economists to estimate the impact on total U.S. industry output of higher or lower production of a single U.S. industry. The “indirect” multiplier for the ball and roller bearing industry in 1997 was 0.91. This multiplier was used to estimate the indirect effect of the dumping of ball bearings on other U.S. industries. The indirect effect is equal to the lost domestic revenue times the indirect multiplier of 0.91. The estimated indirect effect of ball bearing dumping during the mid-1980s was \$0.8 billion in lost activity for other industries. Because the United States is a net debtor country that runs a persistent trade deficit, any increase in imports not offset by an increase in exports requires the United States to accumulate additional liabilities to foreign investors (public or private) equal to the increase in imports. The United States must pay foreign investors for the privilege of consuming the additional imports that result from dumping. We estimate this value to be the product of the increase in dumped imports times the 1-year Treasury constant maturity interest rate. The additional interest costs associated with the increase in dumped imports was approximately \$30 million over the three-year period of investigation.

Table 35, Ball Bearings from France, Germany, Japan, Italy, Romania, Singapore, Sweden, and the United Kingdom:

Indirect Costs and Interest Costs due to Dumping

Item	1985	1986	1987	Total
Indirect industry output multiplier	0.91	0.91	0.91	N/A
1-year T-bill rate (percent)	8.43	6.46	6.76	N/A
Lost indirect activity (\$mil)	249	257	260	767
Interest on borrowed funds (\$mil.)	11	9	9	29

Sources: Bureau of Economic Analysis at <http://www.bea.gov/bea/dn2/i-o.htm#benchmark> (data for multiplier); Federal Reserve Bank of St. Louis at <http://www.research.stlouisfed.org/fred2/series/GS1/downloaddata> (interest rates); and authors' calculations.

The estimates of pure consumer gains due to the dumping of ball bearings are presented in the table below. They indicate that the pure consumer gains, those that did not come at the expense of fair imports and domestic production, were on average less than \$2.5 million annually. As has been the case with most of the industries studied in this report, those gains are relatively small compared to the revenue losses experienced by the domestic industry and its suppliers. It seems that if the assumption of seamless absorption of released factors of production

by the rest of the economy is valid, then the pure consumer gains from dumping are usually relatively small. If that assumption is inaccurate, then the so-called gift to consumers that is supposed to arise from dumping probably does not exceed the economic dislocation that it causes.

Table 36. Ball Bearings from France, Germany, Japan, Italy, Romania, Singapore, Sweden, and the United Kingdom:
Summary of Costs and Benefits of Dumping

Item	1985	1986	1987	Total
Lost revenue due to dumping (\$mil.)	-275	-284	-288	-847
Lost indirect activity (\$mil.)	-249	-257	-260	-767
Interest on borrowed funds (\$mil.)	-11	-9	-9	-29
Consumption gains (\$mil.)	2	3	3	7
Sources: Author's calculations.				

Long-term impact of the order

The orders on ball bearings that arose from the 1989 dumping investigation appear to have had a positive impact on the domestic industry. As shown in the first table of this section, by the time of the first sunset review in 1999, the value of U.S. shipments had nearly doubled, U.S. market share remained high despite the increase in nonsubject imports, and profitability and productivity significantly improved.

After reviewing the data on ball bearings, the Commission determined that ball bearing imports from Romania and Sweden were unlikely to cause injury to the domestic industry if the orders on those countries were revoked. On the other hand, the Commission determined that ball bearing imports from the remaining countries would likely injure the domestic industry if the existing orders were revoked. Consequently, the orders on ball bearing imports from France, Germany, Italy, Japan, Singapore, and the United Kingdom remained in place.

The second review of these orders has been completed, but a decision has not yet been rendered as of this writing. In between the two reviews, the U.S. ball bearing industry has faced competitive challenges from China and other non-subject countries, and falling demand. The decline in demand has been due to a shift in the production of bearing using products to Asia, especially China, and due to significant problems in the U.S. automotive industry, which consumes large amounts of wheel-hub units incorporating ball bearings.

Because foreign producers continue to import ball bearings to the United States despite the existence of duties, the ball bearing industry's receipts from the Continued Dumping and Subsidy Offset Act have been quite large. From 2001 to 2005, U.S. producers received more than \$300 million as a result of the CDSOA.